

2007 University of Wyoming Combined Research and Extension Annual Report

Status: Accepted
Date Accepted: 05/28/08

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I. Report Overview

1. Executive Summary

Agriculture is at a crossroads and faces many challenges and opportunities in the 21st century. Agriculture, as well as land-grant institutions, is challenged to compete in a global economy while still responding to the needs of a diverse U.S. population. Ensuring that agriculture remains profitable and sustainable, while addressing environmental concerns, places new demands on the industry. Issues involving production agriculture, natural resource management, and quality of life generate diverse research and extension directives. Stakeholders play a vital role in identification and prioritization of needs.

The College of Agriculture has a mission to serve the educational and information needs of students, Wyoming citizens and communities, and the global community by providing and distributing unbiased, scientifically sound information. Research and Extension programs at the University of Wyoming focus on five initiatives: 4-H and Youth Development, Community Development Education, Nutrition and Food Safety, Profitable and Sustainable Agriculture Systems, and Sustainable Management of Rangeland Resources.

Total Actual Amount of professional FTEs/SYs for this State

Year:2007	Extension		Research	
	1862	1890	1862	1890
Plan	103.0	0.0	49.6	0.0
Actual	123.7	0.0	47.6	0.0

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

- Internal University Panel
- External University Panel
- External Non-University Panel
- Combined External and Internal University Panel
- Combined External and Internal University External Non-University Panel
- Expert Peer Review

2. Brief Explanation

The merit review process for extension programs covers all programs conducted by UW CES. A team leadership model is utilized to review program plans and chart direction for CES educational programs. Program initiative teams develop and review programs on an annual basis. Teams make decisions to maintain, modify, or create new programs to meet the needs identified through external and internal stakeholder input. Nine area external advisory boards comprised of stakeholders review CES programs annually. Spring, 2007 UW CES held a CSREES program review of the total extension program. The review report is being used as CES moves forward in academic planning for 2009 - 2013. All projects supported with formula funds (Hatch, Multi-State, McIntire-Stennis, Animal Health) must be approved projects. The project proposal is transmitted to the department head and the head appoints a minimum of two internal scientific reviewers who are knowledgeable in the field to review the proposal. After a proposal is revised based on the above review, it is transmitted to the Experiment Station Director. The director's office assigns three external scientific reviewers who are knowledgeable in the field to review the proposal. The Wyoming Agriculture Experiment Station also administers an internal competitive grants program using a portion of federal dollars. Proposals are reviewed by a ten member university-wide committee. Each proposal is also sent to a minimum of two external reviewers.

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged their participation

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey of the general public
- Survey specifically with non-traditional groups
- Survey specifically with non-traditional individuals
- Survey of selected individuals from the general public

Brief Explanation

During the past year stakeholder input came to the College of Agriculture Cooperative Extension Service and Agriculture Experiment Station through a variety of methods. The joint research and extension needs assessment conducted in 2004 was used as a baseline for determining efforts for this POW. The surveys (mail and telephone) addressed preferred methods for receiving information. Stakeholder input gathered through all methods is shared with CES educators, specialists, department heads, and administrators. All counties participate in annual area advisory committee meetings with representatives from each of the five initiative areas who meet in sub-groups to identify specific needs and issues. This input is summarized and shared statewide with both CES and AES. All counties have had targeted advisory meetings to gather stakeholder input on reaching limited resource audiences in the Cent\$ible Nutrition program. County 4-H educators conducted 4-H Expansion and Review committees to specifically address outreach efforts toward underserved youth audiences. County personnel also utilize collaborative partners to learn the needs within communities of the state. In 2007 UW CES had a CSREES program review of the total extension system. Each of the four Research & Extension Centers held an advisory committee meeting to gather input on existing research and outreach programs and to identify new priorities in relation to research. The College of Agriculture maintains a separate statewide advisory committee which meets annually. Three departments, Animal Science, Family and Consumer Sciences, and Veterinary Sciences, have separate advisory committees that provide input on programs in those departments.

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief Explanation

CES advisory committees were formed in the nine Extension areas. Advisory committee members are nominated by extension staff by subject matter interest. Selection to serve on advisory committees is based on gender, geographic representation, race, national origin, and underserved audiences. In addition, the Wyoming County Commissioners Association has formed an advisory committee of county commissioners who meet with the CES Director during quarterly meetings of their association. Research and Extension Center Advisory committees are represented by CES educators, industry leaders, and landowners (government and private) in all counties that they service. Advisory committee members are nominated by CES, AES, and administrative personnel and meet one to two times per year. In addition to these systematic methods of gathering stakeholder input, both AES and CES utilize both individual and groups throughout the state to identify relevant issues of critical importance. Just a few examples include: Commodity groups - such as Wyoming Wool Growers, Stock Growers, Wyoming Wheat Growers, Wyoming Crop Improvement Association, local and state nutrition councils, youth organizations such as Big Brothers, Big Sisters, School Districts. These groups and individuals provide input through both formal and informal discussions with both research and extension personnel. Faculty and CES specialists also gather relevant input from professional colleagues in Wyoming and across the nation.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)
- Survey of the general public
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Survey specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public
- Survey of selected individuals from the general public

Brief Explanation

Stakeholder input is collected through a variety of methods to reach the broadest scope of individuals and groups in Wyoming. CES utilizes annual area advisory meetings which involve both traditional and non-traditional stakeholders. The AES also utilizes annual advisory meetings to gain input on research activities. Surveys, both mail and on-line are used to assess needs. CES educators and researchers target key stakeholders such as agriculture commodity groups, youth organizations, and schools through meetings where discussion is held on needs and issues. University of Wyoming educators and faculty access needs throughout the year based on individual contact with citizens at meetings and in local communities. Faculty and CES specialists gather relevant input from professional colleagues through personal contact and interaction at professional meetings.

3. A statement of how the input was considered

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research Programs
- In the Staff Hiring Process
- In the Action Plans
- To Set Priorities

Brief Explanation

Stakeholder input is used by AES and CES initiative teams to identify emerging issues. Input gathered is used in program planning, evaluation of current programs, and redirection of programs when applicable. Stakeholder input from area advisory groups, county commissioners, and area teams assist in staffing priorities. Search committees comprised of local stakeholders provide input on screening, interviewing and hiring decisions for CES. Input from all sources is used in development, implementation, and evaluation of extension and research programs. Stakeholder input is collected through a variety of methods to reach the broadest scope of individuals and groups in Wyoming. CES utilizes annual area advisory meetings which involve both traditional and non-traditional stakeholders. The AES also utilizes annual advisory meetings to gain input on research activities. Surveys, both mail and on-line are used to assess needs. CES educators and researchers target key stakeholders such as agriculture commodity groups, youth organizations, and schools through meetings where discussion is held on needs and issues. University of Wyoming educators and faculty access needs throughout the year based on individual contact with citizens at meetings and in local communities.

Brief Explanation of what you learned from your Stakeholders

Key issues identified through all methods of stakeholder input:

4-H and Youth Development - 1) increase volunteer training, 2) develop Master Volunteer 4-H Leader program, 3) continue lifeskill training for youth, 4) Initiate workforce skill training for youth; 5) Increase marketing efforts to reach underserved youth and retain older youth in the program.

Community Development Education - 1) Broaden scope of board training, 2) continue financial management training efforts to include youth, 3) Expand efforts in leadership development including leadership institutes in rural areas, 4) research on economic analysis of Federal land management planning is essential to the state.

Nutrition and Food Safety - 1) Expand efforts in food safety at both food service and consumer level. 2) Obesity continues to be identified as a priority issue for adults and youth. 3) Basic nutrition and cooking skills are a priority as many schools have eliminated family and consumer science curriculums. 4) Research on the safety of food is essential to consumer confidence.

Profitable and Sustainable Agriculture Systems - 1) Agriculture education for youth for retention in agriculture careers. 2) Identified changing demographics and lifestyle changes in rural areas. 3) Increased need for educational programming for small acreage owners. 4) Mediation training is needed for agriculture producers due to increased land use for energy expansion and federal land agencies. 5) New methods to deliver information are needed such as newspaper inserts, current information on website, and utilize the Northern Ag Network radio stations to reach producers. 6) Water management, livestock/wildlife interface, and National Animal Identification program were also issues identified. 7) Coalbed Methane water quality.

Sustainable Management of Rangeland Resources - 1) Hands-on range monitoring workshops. 2) Water management including quality, quantity and efficient use. 3) Drought and ranch sustainability. 4) Small acreage workshops to educate new land owners. 5) Renewable energy - energy development and reclamation.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1423111	0	2728024	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	1763775	0	174165	0
Actual Matching	7209354	0	399978	0
Actual All Other	51143	0	0	0
Total Actual Expended	9024272	0	574143	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous years				
Carryover	393412	0	350246	0

V. Planned Program Table of Content

S. NO.	PROGRAM NAME
1	(PSAS)-Crop Systems - Profitable and Sustainable Agriculture Systems
2	(PSAS) Forage Based Livestock Systems - Profitable and Sustainable Agriculture
3	(CDE) Family Resource Management
4	(NFS) Cent\$ible Nutrition Program (EFNEP)
5	(CDE) Leadership Development
6	(NFS) Food Safety
7	(CDE) Entrepreneurship
8	(PSAS) Urban Horticulture and Master Gardeners
9	(4-H) Volunteer Management
10	(4-H) Traditional 4-H
11	(4-H) Non-Traditional 4-H
12	(SMRR) Natural Resource Conservation and Management
13	(NFS) Type 2 Diabetes - Healthy Choices & Lifestyle Promotion
14	(SMRR) 4-H/Youth Natural Resource Education
15	(NFS) Primary Prevention: Promote Healthier Food Choices and Lifestyles
16	(PSAS and SMRR) Wyoming Small Acreages
17	(SMRR) Natural Resource Education for Agricultural Producer and Agency Personnel

Program #1**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(PSAS)-Crop Systems - Profitable and Sustainable Agriculture Systems

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
202	Plant Genetic Resources	5%		5%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plai	10%		10%	
204	Plant Product Quality and Utility (Preharvest)	10%		10%	
205	Plant Management Systems	10%		10%	
212	Pathogens and Nematodes	10%		10%	
213	Weeds Affecting Plants	10%		10%	
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	10%		10%	
215	Biological Control of Pests Affecting Plants	10%		10%	
216	Integrated Pest Management Systems	15%		15%	
601	Economics of Agricultural Production and Farm Management	10%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	15.7	0.0
Actual	6.8	0.0	16.2	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
119340	0	69684	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
492251	0	159988	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Any or all channels of the media will be used to familiarize the public with UW College of Agriculture areas of programming and personnel. Media releases in local newspapers, radio spots and television advertisements will inform the public of upcoming Extension programs including contact persons. Newsletter articles distributed both electronically and through the mail by county offices, area teams, and the University of Wyoming will reach producers locally, regionally, and state-wide. Public educational programs with invited speakers and Extension specialists and educators presenting research-based information will continue to be held in response to local, state, and national crop production issues. Demonstrations of technology and skills training will be included in education curriculum to enhance educational effectiveness. Field tours will be organized to provide producers with the opportunity to observe industry procedure (i.e., tour of an ethanol plant).

2. Brief description of the target audience

The University of Wyoming is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in all programs regardless of their race, national origin, gender, age, religion, or disability. Participants will include policy makers for County, State, and Federal government agencies, crop producers, livestock producers, ag lenders, potential investors, and the scientific community. An existing secondary audience will be the media, general public, and interest groups not directly involved in production agriculture (i.e., environmental groups).

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	2000	50000	500	1000
2007	3353	50000	500	1000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	2
2007 :	3

Patents listed

Plant protected varieties 'Laramie' medic, 'Shoshone' seinfein, 'Forager' pea.

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	2	57	59

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Measures of the success of AES programs will be tied to grant dollars (target 16 grants in 2007), patented and variety protecte

Year	Target	Actual
2007	100	268

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Awareness created for 500 agriculture producers of crops. Target is number of agriculture producers.
2	Pasture land owners and/or managers will be able to recognize indicators of pasture condition and will possess decision-making skills necessary to make needed management decisions. Target is number of pasture land owners reporting outcome.
3	Producers with the resources to irrigate their crops and/or pasture will know and understand costs and returns associated with their irrigation practices and systems. Target is the number of producers reporting outcome.
4	Develop intergrated pest management systems in both irrigated and dryland cropping systems through research efforts. Target is number of systems developed.
5	Through research efforts develop new and improved crops and crop production systems for the High Plains of Wyoming and the West. Outcome indicator is the number of new crops or crop systems developed.
6	Through research evaluate and determine economic feasibility of producing biofuel crops in Wyoming. Outcome indicators include number of crop producers implementing trial of biofuel crops.

Outcome #1**1. Outcome Measures**

Awareness created for 500 agriculture producers of crops. Target is number of agriculture producers.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	500	770

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Crop producers across Wyoming are challenged with increasing production costs, global market competition, environmental pressure, and decreased labor availability. Crop producers, commodity groups such as the Wyoming Crop Improvement Association, and stakeholders have identified research and extension issues to assist with profitability and sustainability of Wyoming farms.

What has been done

Thirty-four educational workshops, classes, or field tours were conducted by CES educators. In addition educators worked one-on-one with agriculture producers to respond to questions and issues. Quarterly newsletters were disseminated to crop producers.

Results

Individuals participating in educational programs and activities reported increased knowledge and awareness.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
216	Integrated Pest Management Systems
215	Biological Control of Pests Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
213	Weeds Affecting Plants

Outcome #2**1. Outcome Measures**

Pasture land owners and/or managers will be able to recognize indicators of pasture condition and will possess decision-making skills necessary to make needed management decisions. Target is number of pasture land owners reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	241

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Forage-based animal agriculture is the only basic industry found in all 23 Wyoming counties. Grazing animals convert grass from rangeland and forage (including alfalfa and crop aftermath) from cultivated lands into marketable products. Therefore practices which improve pasture conditions are critical for agriculture producers.

What has been done

Educational programs, newspaper inserts, newsletters and individual consultations with producers provided educational information on this topic.

Results

Participants in educational activities reported increased awareness and knowledge gained.

4. Associated Knowledge Areas

KA Code	Knowledge Area
213	Weeds Affecting Plants
601	Economics of Agricultural Production and Farm Management
205	Plant Management Systems
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants

Outcome #3**1. Outcome Measures**

Producers with the resources to irrigate their crops and/or pasture will know and understand costs and returns associated with their irrigation practices and systems. Target is the number of producers reporting outcome.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	41

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Water availability, efficient use, and conservation are important issues in Wyoming. Agriculture producers using irrigation for crops need research based information on best practices to make the most efficient use of resources. The Wyoming Crop Improvement Association and agriculture stakeholders identify this as an important issue.

What has been done

Extension educators conducted educational workshops, classes, wrote articles for newsletters and provided individual consultations with producers.

Results

100 percent of participating producers indicated they gained awareness of costs and returns associated with irrigation practices and systems.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #4**1. Outcome Measures**

Develop intergrated pest management systems in both irrigated and dryland cropping systems through research efforts. Target is number of systems developed.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	5	5

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Sugarbeets is the number one cash crop in Wyoming with a production value of over \$45 million. Weed competition is considered to be the major obstacle that prevents the achievement of maximum yield. Weeds not only compete with sugarbeets for light nutrients and water but also interfere with harvest through increased harvest losses.

What has been done

Studies have been conducted around the state to evaluate weed control and sugarbeet response with glyphosate applied alone or in combination with other pesticides in Roundup Ready sugarbeets. Trials include glyphosate rate, application timing, number of applications in all with or without cultivation.

Results

Since glyphosate is applied broadcast no cultivation was required. The total number of applications required varied from 2 to 3 and as needed or weed species present. Application needs to start at the two pound stage for maximum effectiveness. Total income was increased over \$200 per pound with this system.

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems
205	Plant Management Systems
213	Weeds Affecting Plants
204	Plant Product Quality and Utility (Preharvest)

Outcome #5**1. Outcome Measures**

Through research efforts develop new and improved crops and crop production systems for the High Plains of Wyoming and the West. Outcome indicator is the number of new crops or crop systems developed.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	1	3

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Dry beans represent a 15 - 20 million dollar industry to the state of Wyoming. Many of these beans are grown on calcarous soils under iron deficiency.

What has been done

Studies were established to look at a biological approach to management of iron deficiency in dry beans. Annual ryegrass was seeded as a companion crop with dry beans on calcarous soils at several sites. Dry bean growth, yield, productivity and, iron content of soil was analyzed.

Results

The companion crop resulted in a more sustainable production method and reduced reliance on chelated iron applications.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #6**1. Outcome Measures**

Through research evaluate and determine economic feasibility of producing biofuel crops in Wyoming. Outcome indicators include number of crop producers implementing trial of biofuel crops.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	3	5

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Over 80 percent of wheat acres in Wyoming are planted under crop fallow rotations without any kind of consideration of cropping or tillage practices. Under this system over 75 percent of the moisture is typically lost to weeds, evaporation and runoff. Further this system degrades soil structure and causes depletion of organic matter.

What has been done

UW is currently comparing soil moisture, nutrient dynamics and economics of four long term in place conservation cropping systems (to non-till, reduced till, organic and diverse rotation grain producing systems to conventional crop fallow systems).

Results

This study will allow us to improve management approaches at a time when many producers are considering intensified production due to higher prices brought on by biofuels.

4. Associated Knowledge Areas

KA Code	Knowledge Area
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
205	Plant Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (Global market changes)

Brief Explanation

Wyoming continues to face drought conditions which impact crop production.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- During (during program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #2**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(PSAS) Forage Based Livestock Systems - Profitable and Sustainable Agriculture

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
301	Reproductive Performance of Animals	20%		20%	
302	Nutrient Utilization in Animals	15%		15%	
305	Animal Physiological Processes	5%		5%	
307	Animal Management Systems	20%		20%	
311	Animal Diseases	15%		15%	
314	Toxic Chemicals, Poisonous Plants, Naturally Occuring Toxir	5%		5%	
601	Economics of Agricultural Production and Farm Management	10%		10%	
602	Business Management, Finance, and Taxation	10%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	12.0	0.0	22.9	0.0
Actual	6.8	0.0	22.7	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
119340	0	94984	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
489368	0	221880	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Any or all channels of the media will be used to familiarize the public with UW CES and the AES programming areas and personnel. Media releases in local newspapers, radio spots and television advertisements will inform the public of upcoming Extension programs including contact persons. Newsletter articles distributed both electronically and through the mail by county offices, area teams, and the University of Wyoming will reach producers locally, regionally, and state-wide. Public educational programs with invited speakers and Extension specialists and educators presenting research-based information, will continue to be held in response to local, state, and national livestock production issues. Demonstrations of technology and skills training will be included in education curriculum to enhance educational effectiveness. Field tours will be organized to provide producers with the opportunity to observe industry procedure. Specific Areas of Focus. Emphasis will be placed on the four main areas which follow; Herd management and traceability, herd development, cropping systems and livestock development, risk and operation management techniques and alternatives to enhance the stability of Wyoming livestock producers. The new Sustainable Agriculture Research and Extension Center (SAREC) located at Lingle, Wyoming will provide a resource base for integrating livestock/forage based programs.

2. Brief description of the target audience

Participants will include policy makers for county, state, and federal government agencies, livestock producers, crop producers, ag lenders, and potential investors. An existing secondary audience will be the media, general public, and interest groups not directly involved in the production of agriculture (i.e., environmental groups).

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	2000	50000	1000	1000
2007	4756	50000	1000	1000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year Target

Plan: 1

2007 : 1

Patents listed

Method of removing arsenic from water.

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	11	92	103

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Effectiveness of research programs will be based on publications, external grant support, and integration into existing extensio

Year	Target	Actual
2007	30	110

Output #2

Output Measure

- Research efforts will develop new and improved forages for high elevation livestock systems. Target measures are new or imp

Year	Target	Actual
2007	1	1

Output #3

Output Measure

- Develop improved methods of estimating forage base under varying environmental conditions. Targets included new methods

Year	Target	Actual
2007	1	1

Output #4

Output Measure

- Develop profitable and sustainable forage based livestock systems for the High Plains. Targets are defined as new systems d

Year	Target	Actual
2007	1	1

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Awareness Created for Wyoming Livestock producers through educational activities. Target numbers indicate number of producers reached.
2	Wyoming producers will implement electronic animal identification to gain advantages in herd management. Target shows that by 2009, 10 percent of producers in Wyoming will have voluntarily implemented electronic animal identification.
3	Producers will also gain an understanding of heifer development as well as opportunities for matching genetic improvement with successful marketing strategies. Targets reflect number of livestock producers making changes in heifer development.
4	Wyoming producers will benefit through an increased value of livestock and crops related to improved cropping practices, herd selection and management. Outcomes indicate by 2009, 25 Wyoming producers will report increased sustainability and profitability due to educational efforts.
5	Through research efforts UW will minimize disease transfer between livestock and wildlife. Outcomes reflect number of methods identified to diagnose and prevent disease transfer.

Outcome #1**1. Outcome Measures**

Awareness Created for Wyoming Livestock producers through educational activities. Target numbers indicate number of producers reached.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	500	627

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Livestock producers throughout Wyoming face an ever changing industry with issues such as: increasing cost of production, increasing pressure for individual animal identification, changing requirements for marketing knowledge. Livestock accounts for approximately 78 percent of statewide agricultural cash receipts.

What has been done

CES educators conducted over 45 educational programs including a statewide Ag Profitability conference in conjunction with Wyoming Stock Growers and Wool Growers Associations. Animal ID, master cattleman courses, newsletters, newspaper inserts in ag publications, radio, and applied research are on-going efforts to disseminate information to producers.

Results

Producers participating in educational programs or individual consultations reported increased knowledge and awareness.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
302	Nutrient Utilization in Animals
307	Animal Management Systems
301	Reproductive Performance of Animals
311	Animal Diseases

Outcome #2**1. Outcome Measures**

Wyoming producers will implement electronic animal identification to gain advantages in herd management. Target shows that by 2009, 10 percent of producers in Wyoming will have voluntarily implemented electronic animal identification.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

There is increasing pressure for individual animal identification. The Wyoming Livestock Board and livestock producers need information regarding requirements and benefits.

What has been done

CES educators have conducted educational programs to create awareness about the animal ID program. Articles in newsletters and newspapers have been disseminated.

Results

100 percent of participants in educational programs have reported increased knowledge and awareness.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management

Outcome #3**1. Outcome Measures**

Producers will also gain an understanding of heifer development as well as opportunities for matching genetic improvement with successful marketing strategies. Targets reflect number of livestock producers making changes in heifer development.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	25

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Livestock makes up 78 percent of Wyoming cash receipts. Helping livestock producers gain understanding of heifer development as well as matching genetic improvement with successful marketing strategies will improve profitability.

What has been done

Educational classes were conducted by the State Extension Beef Specialist and area educators on heifer development and marketing. Newsletter articles, and presentations at the Wyoming Beef Cattle Improvement Association were held. UW CES sponsored the Wyoming Ag Profitability Conference in conjunction with Wyoming Stock Growers winter meeting.

Results

100 percent of participants reported increased knowledge and awareness of heifer development and genetic improvement.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
301	Reproductive Performance of Animals
601	Economics of Agricultural Production and Farm Management

Outcome #4

1. Outcome Measures

Wyoming producers will benefit through an increased value of livestock and crops related to improved cropping practices, herd selection and management. Outcomes indicate by 2009, 25 Wyoming producers will report increased sustainability and profitability due to educational efforts.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wyoming major agriculture industry is livestock based. Most livestock feed on forage. Improved production of forage crops will reduce cost for livestock producers and increase profitability.

What has been done

Educational programs conducted by CES educators, newsletter articles, newspaper columns, applied research, individual consultations.

Results

Participants in educational programs report increased knowledge and awareness during this first year of programming.

4. Associated Knowledge Areas

KA Code	Knowledge Area
314	Toxic Chemicals, Poisonous Plants, Naturally Occuring Toxins, and Other Hazards Affecting Animals
302	Nutrient Utilization in Animals
601	Economics of Agricultural Production and Farm Management
307	Animal Management Systems

Outcome #5

1. Outcome Measures

Through research efforts UW will minimize disease transfer between livestock and wildlife. Outcomes reflect number of methods identified to diagnose and prevent disease transfer.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2	3

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Brucellosis is a disease of concern in Wyoming not only for livestock but also in wildlife populations. In particular *Brucella abortus* has the ability to infect Wyoming elk herds, and consequently be transmitted to cattle.

What has been done

Studies are examining serum collected from sero-positive elk at the National Elk Refuge, Jackson, WY using a gene discovery technique known as IVIAT, six brucella specific proteins which are expressed during infection are being characterized.

Results

These proteins may represent potential *Brucella*-specific diagnostic targets in elk and their characterization may reveal the genetic pattern of the pathogen's infection survival in the host. This could potentially lead to the identification of virulence factors critical in eliciting response and may form the basis of a next-generation vaccine against this disease.

4. Associated Knowledge Areas

KA Code	Knowledge Area
311	Animal Diseases

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (Global market changes)

Brief Explanation

Market conditions, and weather extremes including drought impact outcomes.

V(I). Planned Program (Evaluation Studies and Data Collection)**1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)

Evaluation Results**Key Items of Evaluation**

Program #3

V(A). Planned Program (Summary)

1. Name of the Planned Program

(CDE) Family Resource Management

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development	10%		10%	
801	Individual and Family Resource Management	70%		70%	
802	Human Development and Family Well-Being	20%		20%	
Total		100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	3.5	0.0	0.3	0.0
Actual	3.1	0.0	0.3	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
54405	0	1485	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
227026	0	3412	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Family resource management programs will reach out to a broad spectrum of constituents throughout Wyoming using a variety of anticipated programs. Outputs include methods such as train-the-trainer workshops, home-study courses, and such approaches as the Internet (www.uwyo.edu/CES/FRM/), and satellite. Also included are publications, meetings, news releases, and feature articles.

2. Brief description of the target audience

The University of Wyoming College of Agriculture is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in programs regardless of their race, national origin, gender, age, religion, or disability. The ultimate consumer of the educational product will be all individuals (including youth and senior citizens), families (including low-income families), and in general people at risk of experiencing financial stress. Other audiences through which the University of Wyoming Cooperative Extension Service programs may be delivered include 1.) Teachers of adolescents, 2.) Public and private agencies, and 3.) Private/public employers who are unlikely to have a human resources department. The group of educators, specialists and faculty responsible for leading and delivering the outputs in the program is the smallest of the University of Wyoming's Cooperative Extension Service groups. A priority for program development is to use methods of information and instruction that make it possible for the most constituents to be assisted while minimizing face-to-face work. Thus the team will emphasize train-the-trainer courses, newsletters and electronic delivery of information and programming.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	150	1000	150	1000
2007	2191	5000	150	1000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Ultimately it will benefit all families in Wyoming. Short-term effects may be increased grant funding and increased involvement

Year	Target	Actual
2007	0	1

Output #2

Output Measure

- Measures of the success of AES programs will be tied to grant dollars, involvement on multi-state projects and scientific public

Year	Target	Actual
2007	5	7

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Permanent changes in practices as determined by follow-up surveys with those attending meetings, events and workshops. Target numbers reflect number of individuals reporting changes in practices as a result of educational activities.
2	Financial stability and security in Wyoming households will improve. Targets reflect number of households reporting improvement as a result of educational efforts.
3	Improved quality of life for participants in family resource management programs through adoption of management principles. Target measures are number of participants reporting positive change.
4	One or more management principles from non-formal education programs on personal finance management are adopted by workshop participants. Targets are number of participants reporting adoption of management principles.
5	Wyoming Schools will increase awareness of University of Wyoming Cooperative Extension Service as a source of financial management curriculum. Target numbers are number of programs presented in Wyoming schools.
6	Improved credit debt-management skills reported by participants in workshops. Target numbers include number of participants reporting improved skills.
7	Increased public interest in personal finance as determined by attendance at meetings, workshops, events, demonstrations. Target numbers are number of individuals participating.
8	Causal connections made between program events and participant behaviors as reflected by qualitative comments, stories and anecdotes about change in awareness or behaviors traceable to this Extension effort. Target numbers are participants reporting positive changes.
9	Knowledge and confidence gained as measured by end-of-workshop forms. Target numbers are participants reporting change through evaluations.
10	Increased number of people accessing electronic training and educational materials. Target numbers are participants utilizing on-line courses; or going to web site for information.
11	Research efforts will result in Refereed Journal articles, abstracts and proceedings, and other publications. Target numbers are number of above published.
12	Research efforts will be reported through presentations at professional meetings. Target number indicate number each year.

Outcome #1**1. Outcome Measures**

Permanent changes in practices as determined by follow-up surveys with those attending meetings, events and workshops. Target numbers reflect number of individuals reporting changes in practices as a result of educational activities.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	54

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

The U.S. Commerce Department recently reported that American's personal savings rate was -0.5 percent - a negative number. This meant the average American spent all of his or her disposable income and had to increase borrowing or dip into previous savings. The -0.5 percent savings rate was the lowest number since the Great Depression of 1933. Stakeholder groups identify this as a priority area for CES to address.

What has been done

Big Horn Basin Saves was adapted from the national campaign called America Saves. The three month program encouraged participants to set a savings goal, determine method of saving and provide progress reports. 13 educational articles about savings or reducing debt were distributed to the 84 participants enrolled in the program.

Results

84 individuals enrolled in the first BHBS program. Individuals wrote a savings goal, which totaled \$78,554. After three months, progress reports were submitted by 54 participants who reported savings \$91,311 during the 13-week program. Participants also reported total debt reduced in three months; six people reduced debt by \$11,676. Fifty-one of the 54 reported having made savings a regular habit.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #2**1. Outcome Measures**

Financial stability and security in Wyoming households will improve. Targets reflect number of households reporting improvement as a result of educational efforts.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Households living on the edge of their ability to manage finances create the potential for tremendous emotional and economic strain. Area Advisory committees identified the issue of improving the financial health of Wyoming households as a top issue for CES to address.

What has been done

39 educational programs were presented by CES educators including Big Horn Basin Saves.

Results

477 individuals participated in educational programs (four were series of 4 - 8 weeks). The first year participants reported gaining knowledge and awareness. The Big Horn Basin Saves program reported \$91,311 saved by 54 participants during the 13-week program. Participants also reduced debt by \$11,676. Fifty-one of the 54 reported having made savings a regular habit.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #3**1. Outcome Measures**

Improved quality of life for participants in family resource management programs through adoption of management principles. Target measures are number of participants reporting positive change.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Financial management is an important issue identified by advisory groups and stakeholder organizations. In 2005, American's personal savings rate was -0.5 percent - a negative number. This meant the average American spent all of his or her disposable income and had to increase borrowing or dip into previous savings.

What has been done

39 educational programs were conducted by CES educators reaching 477 individuals.

Results

Evaluations showed that participants gained understanding of where their money goes, learned about credit agencies that could help, and developed budgets to help with money management.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #4

1. Outcome Measures

One or more management principles from non-formal education programs on personal finance management are adopted by workshop participants. Targets are number of participants reporting adoption of management principles.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	54

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Savings by American's is at an all time low. The average American spends all of his or her disposable income and had to increase borrowing or dip into previous savings. This issue is a priority identified by area advisory committees.

What has been done

CES educators conducted 39 educational programs reaching 477 individuals. Big Horn Basin Saves was a 13 week series where participants set a savings goal and reported on progress at the end of the program.

Results

Participants enrolled in Big Horn Basin Saves reported setting a savings goal of \$78, 554. After 3 months, progress reports submitted by 54 participants who reported saving \$91,311 during the 13-week program. In addition six people reduced debt by \$11,676. Fifty one reported having made savings a regular habit.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #5

1. Outcome Measures

Wyoming Schools will increase awareness of University of Wyoming Cooperative Extension Service as a source of financial management curriculum. Target numbers are number of programs presented in Wyoming schools.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)****What has been done**

Program was not implemented in 2007

Results

None to report for 2007

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #6**1. Outcome Measures**

Improved credit debt-management skills reported by participants in workshops.

Target numbers include number of participants reporting improved skills.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	167

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

11 agencies and organizations in Northeast Wyoming requested credit-debt management skills for clientele.

What has been done

The NE area educator conducted 22 educational programs reaching 167 individuals on money management and credit topics.

Results

157 class participants completed program evaluations reporting that the classes helped in dealing with money issues and participants believe they will do a better job managing family finances. Participants listed specific goals or practice changes they planned - these included: developing a budget, setting goals as family, and having charts to follow and organize financial planning.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #7**1. Outcome Measures**

Increased public interest in personal finance as determined by attendance at meetings, workshops, events, demonstrations. Target numbers are number of individuals participating.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	477

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Personal finance is identified annually by area advisory committees and stakeholder groups. Lack of personal savings, increased bankruptcy, and lack of knowledge of financial management skills makes this a critical issue for UW CES to address.

What has been done

39 educational programs were conducted reaching 477 individuals.

Results

Savings increased for 56 individuals. Six reported decreased debt. 100 percent of program participants reported increased knowledge and awareness as a result of educational efforts.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #8**1. Outcome Measures**

Causal connections made between program events and participant behaviors as reflected by qualitative comments, stories and anecdotes about change in awareness or behaviors traceable to this Extension effort. Target numbers are participants reporting positive changes.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	20	167

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Financial management is an important issue for Wyoming and America. Decreased savings, bankruptcy incidences increasing, home foreclosures and increasing debt makes financial management an important issue.

What has been done

CES educators conduct educational programs, classes, and conduct media campaigns to increase awareness and knowledge of participants.

Results

Financial management class participants from 22 sessions all could identify one goal or change in practice they planned to implement. Confidence and skills increased in the area of financial management.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #9

1. Outcome Measures

Knowledge and confidence gained as measured by end-of-workshop forms.
Target numbers are participants reporting change through evaluations.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	167

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Financial management is a critical issue identified by Wyoming stakeholders and agencies. Increases in debt, bankruptcy, home foreclosures, and decreased savings all indicate a need for financial management education.

What has been done

39 workshops were conducted by CES educators on topics relating to credit, savings, bankruptcy, budgeting and debt reduction.

Results

167 participants in 22 classes reported increased knowledge and confidence as a result of programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #10

1. Outcome Measures

Increased number of people accessing electronic training and educational materials. Target numbers are participants utilizing on-line courses; or going to web site for information.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	86

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Surveys and advisory committees have indicated many Wyoming citizens prefer to receive information via media or non-traditional methods. Development of on-line courses and dissemination of educational information by non traditional methods will increase outreach efforts of CES.

What has been done

In financial management, an on-line course was not developed in 2007. Big Horn Basin Saves was a course where information was disseminated weekly via e-mail to participants.

Results

Participants in Big Horn Basin Saves reported ease of accessing the program. Media efforts raised awareness of CES as a reliable source of financial management information.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #11**1. Outcome Measures**

Research efforts will result in Refereed Journal articles, abstracts and proceedings, and other publications. Target numbers are number of above published.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	3	2

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

The economic well being of WY households effects the state as a whole. The median Wyoming household income is \$43,785 with almost 3000 bankruptcies per year in the state.

What has been done

The following have been identified as pressing issues: financial literacy, commercialization of schools; protecting financial information, and risk assessment.

Results

Information obtained is being utilized by legislators and resulted in the introduction of five WY house bills this past year. Bills introduced were on long term health insurance, fair housing, mortgage insurance, WY work force housing task force and post dated checking.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #12

1. Outcome Measures

Research efforts will be reported through presentations at professional meetings. Target number indicate number each year.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

No report for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)
- Other (Changes in Technology)

Brief Explanation

Two CES extension educators left in 2007, one through retirement, the other through resignation. This prevented more extensive programming in financial management. Program priorities including development of a non-profit board training prevented development of on-line financial management classes.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #4**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(NFS) Cent\$ible Nutrition Program (EFNEP)

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	50%		50%	
704	Nutrition and Hunger in the Population	50%		50%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	3.5	0.0	0.0	0.0
Actual	3.5	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
51143	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Adult curriculum taught in a series of lessons; Adult one-time lessons; Youth curricula taught in a series of lessons and day camps; Displays and demonstrations; State and community partnerships with agencies serving the low-income; Training for educators ; Evaluation of program; Ongoing - Updating of curricula and materials.

2. Brief description of the target audience

The University of Wyoming is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in all programs regardless of their race, national origin, gender, age, religion, or disability. Specific target audience groups: Low-income adults, Youth in Title I schools.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	100	500	500	500
2007	229	500	693	500

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Increased adoption of healthy food practices and participation in regular physical activity; Increased adoption of healthy food p

Year	Target	Actual
2007	100	229

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Increased awareness and knowledge gained for EFNEP program participants.
2	Nutrition and food practices improved for EFNEP participants.
3	Food resource management improved for EFNEP participants.
4	Improved personal hygiene such as hand washing; Avoidance of cross-contamination ; Keeping foods at safe temperatures for EFNEP participants.
5	Using a variety of food resources to reduce food costs; Providing culturally acceptable meals that are balanced for cost as well as for nutritional value. Targets indicate number of EFNEP participants.
6	Number of EFNEP participants reporting increased availability of personal/family food resources.

Outcome #1**1. Outcome Measures**

Increased awareness and knowledge gained for EFNEP program participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	229

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming has an average of 22,981 food stamp recipients in 9,635 households. Wyoming's large geographic size and low population makes food security a challenge with limited resources, and makes nutrition education, including food resource management, very important. Legislators, state agencies, and advisory groups identify this as a priority issue for CES to address.

What has been done

229 adult EFNEP clients and 693 youth participated in a series of lessons on nutrition, food safety, and food buying skills. Newsletters are distributed monthly to clientele. Short lessons are conducted at WIC as a recruitment tool for the program. Marty Moose is taught to 5th and 6th grade students in title I schools in two communities in Wyoming.

Results

100 percent of participants reported increased knowledge and skills as a result of classes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population
703	Nutrition Education and Behavior

Outcome #2**1. Outcome Measures**

Nutrition and food practices improved for EFNEP participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	229

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming has an average of 22,981 food stamp recipients in 9,635 households. Wyoming's large geographic size and low population makes food security a challenge for those with limited resources, and makes nutrition education very important.

What has been done

Adults with young children participated in a series of lessons (averaging 8.7 lessons per person).

Results

90 percent showed improvement in one or more nutrition practices.

97 percent reported a positive change in any food group.

63 percent reported using the "Nutrition Facts" labels more often to make food choices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

Outcome #3**1. Outcome Measures**

Food resource management improved for EFNEP participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	229

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming has an average of 22,981 food stamp recipients in 9,635 households. Wyoming's large geographic size and low population makes food security a challenge for those with limited resources, including food resource management very important.

What has been done

229 individuals participated in a series of lessons (averaging 8.7 lessons per person). Newsletters are distributed to participants monthly.

Results

84 percent showed improvement in one or more food resource management practices.

52 percent reported planning meals ahead of time more often.

46 percent reported comparing prices more often before purchasing food.

46 percent reported shopping with a grocery list more often.

4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population

Outcome #4**1. Outcome Measures**

Improved personal hygiene such as hand washing; Avoidance of cross-contamination ; Keeping foods at safe temperatures for EFNEP participants.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	229

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming has an average of 22,981 food stamp recipients in 9,635 households. Wyoming's large geographic size and low population makes food security a challenge for those with limited resources. Food safety is very important.

What has been done

229 adults participated in an average of 8.7 lessons which included food safety information. Newsletters were distributed monthly to program participants.

Results

61 percent showed improvement in one or more food safety practices.

53 percent reported thawing frozen foods at room temperature less often.

28 percent reported washing hands with soap and warm running water before preparing food more often.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #5**1. Outcome Measures**

Using a variety of food resources to reduce food costs; Providing culturally acceptable meals that are balanced for cost as well as for nutritional value.

Targets indicate number of EFNEP participants.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	229

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming has an average of 22,981 food stamp recipients in 9,635 households. Wyoming's large geographic size and low population makes food security a challenge for those with limited incomes.

What has been done

A series of lessons are conducted (averaging 8.7 lessons per person). Newsletters are distributed monthly. The Cent\$ible Nutrition cookbook which is given to all clients has been translated into Spanish.

Results

84 percent showed improvement in one or more food resource management practices.

90 percent showed improvement in one or more nutrition practices.

61 percent showed improvement in one or more food safety practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

Outcome #6**1. Outcome Measures**

Number of EFNEP participants reporting increased availability of personal/family food resources.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	229

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming has an average of 22,981 food stamp recipients in 9,635 households. Wyoming's large geographic size and low population makes food security a challenge for those with limited resources, and makes nutrition education, including food resource management, very important.

What has been done

229 adults participated in a series of lessons, averaging 8.7 lessons per person. 693 Youth participated in a series of lessons in school classrooms, afterschool programs and camps.

Results

41 percent reported not running out of food before the end of the month.

Families reported saving an average of \$44 per month on food.

4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Appropriations changes
- Populations changes (immigration,new cultural groupings,etc.)

Brief Explanation

The only factor affecting outcomes was changes in reporting software (NEERS5) and lack of state reporting program to aggregate data.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)
- Case Study

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #5

V(A). Planned Program (Summary)

1. Name of the Planned Program

(CDE) Leadership Development

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
803	Sociological and Technological Change Affecting Individuals,	100%		100%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	3.5	0.0	0.0	0.0
Actual	4.8	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
84240	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
343783	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• Community-based leadership training institutes – (EVOLVE) Extension Volunteer Organization for Leadership Vitality and Education. • Skill training workshops – i.e. board training. • General public information and educational efforts – i.e. public media materials; information/educational meetings and workshops; books, booklets, bulletins, training materials; providing data. • Facilitation of community processes. • Analyses of community data and economic impact. • Assessments to identify individual strengths and areas to be strengthened to guide personal development and grow talent. • Media resources to promote community capital development Extension education and increase awareness of Extension resources.

2. Brief description of the target audience

Targeted audiences include: • Elected officials. • Members and leaders of formal and informal community organizations. • Faith-based leaders and members. • Business owners/managers/employees. • Trade/produce groups. • Educational entities. • Federal/state/local agency leaders/members. • Identified publics. • The University of Wyoming is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in programs regardless of their race, national origin, gender, age, religion, or disability.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	300	500	150	500
2007	4361	1000	150	500

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	1	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of individuals participating in programs. Target numbers are participants in leadership programs.

Year	Target	Actual
2007	150	165

Output #2

Output Measure

- Number of programs delivered. Target numbers reflect programs delivered each year in Wyoming.

Year	Target	Actual
2007	25	59

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Participants will develop skills and confidence necessary for community participation, find resources to enhance community capital, recognize the needs for community vision, capacity building, and direction, and strengthen inner-community relationships. Target is the number of participants reporting positive change.
2	Participants will be able to utilize collaborative/coalition building practices to implement visionary community programs in order to provide the community with leaders, officials, and volunteers who are able to affect desired change or stability. Targets are number of participants reporting skills listed above.
3	Creation of economically strengthened and sustainable rural Wyoming communities that address the changes and impacts affecting them; Increased community capacity through an enhanced capitals framework. Targets include number of communities involved in leadership programs reporting positive changes.

Outcome #1**1. Outcome Measures**

Participants will develop skills and confidence necessary for community participation, find resources to enhance community capital, recognize the needs for community vision, capacity building, and direction, and strengthen inner-community relationships. Target is the number of participants reporting positive change.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	1244

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Leadership development was identified as a need by the Wyoming Rural Development Council's Community Assessments. This was confirmed by area advisory committees. The Wyoming Business Council has shared their vision of community economic development using a building block model. At the base are three blocks - leadership development, workforce development, and community capacity building.

What has been done

Comprehensive leadership programs have been initiated in 7 counties in Wyoming each meeting over a 6 - 8 month period involving 100 - 100 contact hours with each participant. In addition CES educators have developed a non-profit board handbook and curriculum for board training. Educators also deliver educational programs on conflict management, building better meetings, social action process, appreciative inquiry, and facilitation skills.

Results

Over 165 individuals received training through established leadership programs. Participants reported gaining confidence in the areas of communication, conflict management, running meetings, and social action process. Follow up surveys show that many graduates of the program have taken on leadership roles. These include civic organizations, leadership roles at work, and several individuals have run for public office or now serve on county or city boards.

The non-profit board handbook was completed and introduced to County Commissioners with positive results. Board training is on-going.

Other training - conflict management, parliamentary procedure, appreciative inquiry and others indicate participants have gained knowledge, skills, and awareness.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

Outcome #2**1. Outcome Measures**

Participants will be able to utilize collaborative/coalition building practices to implement visionary community programs in order to provide the community with leaders, officials, and volunteers who are able to affect desired change or stability. Targets are number of participants reporting skills listed above.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	20

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Leadership development was identified as a need by the Wyoming Rural Development Council's Community Assessments and Area Advisory Committees.

What has been done

Leadership institutes have been established in 7 counties in Wyoming. A non-profit board handbook and curriculum have been developed for elected officials and local boards.

Results

20 participants in programs reported through follow-up evaluations that the skills and knowledge gained through programs increased their confidence. 20 participants reported taking on leadership roles in their community, job, or civic organization.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

Outcome #3**1. Outcome Measures**

Creation of economically strengthened and sustainable rural Wyoming communities that address the changes and impacts affecting them; Increased community capacity through an enhanced capitals framework. Targets include number of communities involved in leadership programs reporting positive changes.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	5	6

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Leadership development was identified as a need by the Wyoming Rural Development Council's Community Assessments. This was later reaffirmed by Area Advisory Committees and the Research and Extension Needs Assessment in 2004.

What has been done

Comprehensive leadership institutes have been established in 7 counties in the state. In 2007, 6 institutes were held, each over a 6 - 8 month period with an average of 100 - 110 contact hours with each participant.

Results

Class participants consistently evaluate the leadership course as excellent. Evaluation data shows that participants increase skills in communication, conflict management, how to run effective meetings, group process, understand the social action process, and gain confidence in their leadership skills.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Competing Public priorities
- Competing Programatic Challenges
- Other (Limited Resources)

Brief Explanation

One educator resigned, which limited one institute from being held in 2007. The Community Development Education initiative team has only five educators statewide at this time.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #6**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(NFS) Food Safety

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
712	Protect Food from Contamination by Pathogenic Microorgani	100%		100%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	1.2	0.0
Actual	5.9	0.0	1.2	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
103545	0	8012	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
425224	0	14698	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

1.) Educational programs 2.) Media outreach 3.) Health Fairs 4.) Training 5.) Assessment/Data Collection; 6.) Research

2. Brief description of the target audience

The University of Wyoming College of Agriculture is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in Extension programs regardless of their race, national origin, gender, age, religion, or disability. Targeted audiences include: • General Public (Youth and Adults) • Food Handlers: Commercial and Temporary Food Service • In-Home and Child Care Center Providers.

V(E). Planned Program (Outputs)**1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	500	2000	500	1000
2007	1598	2000	500	1000

2. Number of Patent Applications Submitted (Standard Research Output)**Patent Applications Submitted**

Year	Target
Plan:	1
2007 :	0

Patents listed**3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	Extension	Research	Total
Plan			
2007	0	1	1

V(F). State Defined Outputs**Output Target****Output #1****Output Measure**

- Number of individuals participating in programs. Target numbers are participants in food safety programs.

Year	Target	Actual
2007	500	2098

Output #2**Output Measure**

- Number of educational programs or activities implemented. Targets are number of programs implemented.

Year	Target	Actual
2007	15	20

Output #3**Output Measure**

- Measures of the success of AES programs will be tied to grant dollars, patented processes developed, and scientific presentat

Year	Target	Actual
2007	8	3

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Increased awareness and knowledge of food safety practices. Target: number of participants.
2	Behavior or practice changes that improve food safety. Target is number of participants reporting behavior or practice changed.
3	Reduced health care cost and economic loss to restaurants as a result of food-borne outbreaks. Target is number of participants or restaurants reporting reduced economic loss.
4	Decreased incidence of food-borne illness outbreaks in food service establishments. Target is the number of restaurants atributing decreased incidence of food-borne illness outbreaks to CES programs.
5	Through research, develop improved detection methods for E.coli and Listeria in food. Target numbers are detection methods developed or improved.

Outcome #1**1. Outcome Measures**

Increased awareness and knowledge of food safety practices. Target: number of participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	500	3877

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Microbial contamination of food is a serious public health problem: Each year in the U.S., foodborne diseases cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths. With approximately 60% of foodborne illness outbreaks nationwide attributable to food-service establishments, food-service personnel are key to reducing the risk of foodborne illness. UW CES partners with the Wyoming Department of Agriculture or a local city/county health department to conduct a variety of educational programs.

What has been done

Coalition team members trained 928 food handlers in the following workshops: Basic 208; Intermediate 348; Advanced 323; ServSafe - 179; Day Care 82; and Food Safety works - 79. In-house food service training reached 102 individuals. In addition CES educators presented programs in schools reaching 1000 youth. Consumer programs and displays reached 971 and 876 individuals, respectively.

Results

205 (97%) made at least one change related to cleanliness, for example, washed their hands more often.

169 (80%) made at least one change related to cooling food, for example, put food into shallow containers or cut meat into smaller pieces before putting in the refrigerator.

165 (78%) made at least one change related to food preparation, for example, prevented cross-contamination by keeping raw meats, cooked foods, and fresh produce separated.

158 (75%) made at least one change related to other miscellaneous areas, for example, monitored critical control points more closely.

148 (70%) made at least one change related to cooking food, for example, used a stove or microwave - not a steam table - to reheat food.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

Outcome #2**1. Outcome Measures**

Behavior or practice changes that improve food safety. Target is number of participants reporting behavior or practice changed.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	250	1211

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Microbial contamination of food is a serious public health problem: Each year in the U.S. foodborne diseases cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths. With approximately 60% of foodborne illness outbreaks nationwide attributable to food-service establishments, food-service personnel are key to reducing the risk of foodborne illness.

What has been done

UW CES educators in collaboration with health inspectors from the Wyoming Department of Agriculture or a local city/county health department conduct a wide variety of educational programs. CES educators take basic food safety including handwashing programs into schools.

Results

1000 youth reported learning proper techniques to wash hands and demonstrated this during the class.

205 (97%) of adults made at least one change related to cleanliness.

169 (80%) made at least one change related to cooling foods.

165 (78%) made at least one change related to food preparation.

158 (75%) made at least one change related to miscellaneous areas, such as monitored critical control points more closely.

138 (70%) made at least one change related to cooking food.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

Outcome #3**1. Outcome Measures**

Reduced health care cost and economic loss to restaurants as a result of food-borne outbreaks. Target is number of participants or restaurants reporting reduced economic loss.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	5

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Microbial contamination of food is a serious public health problem: Each year in the U.S. foodborne diseases cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths.

What has been done

CES in collaboration with the Wyoming Food Safety Coalition, delivers a variety of food safety courses to food-service personnel, public school lunch staff, and others in the food service industry.

Results

5 participating food service establishments credit the food safety classes as proving impact to positive inspections by regulatory agencies. No outbreaks were reported.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

Outcome #4**1. Outcome Measures**

Decreased incidence of food-borne illness outbreaks in food service establishments. Target is the number of restaurants attributing decreased incidence of food-borne illness outbreaks to CES programs.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	5

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Microbial contamination of food is a serious public health problem: Each year in the U.S. foodborne diseases cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths. With approximately 60% of foodborne illness outbreaks attributable to food-service establishments, food-service personnel are key to reducing the risk.

What has been done

Numerous classes have been conducted by CES educators and collaborators with the Wyoming Food Safety Coalition.

Results

Improved food handling behaviors, such as those estimated to have been made by workshop participants, increase the likelihood that food served in Wyoming is safe and, therefore, decrease the risk of foodborne illness.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

Outcome #5**1. Outcome Measures**

Through research, develop improved detection methods for E.coli and Listeria in food. Target numbers are detection methods developed or improved.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	1	1

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Listeria Monocytogenes is a food borne pathogen that can infect the very young, old, pregnant women, and immuno compromised individuals. It causes severe illness in over 2000 people and 500 deaths each year.

What has been done

Genes involved in mediating resistance to the food preservation agent pediocin Ach have been identified.

Results

This information is important in designing food preservation methods using the principle of multi-factorial food preservation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Appropriations changes
- Government Regulations

Brief Explanation

None

V(I). Planned Program (Evaluation Studies and Data Collection)**1. Evaluation Studies Planned**

- Before-After (before and after program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #7**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(CDE) Entrepreneurship

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
601	Economics of Agricultural Production and Farm Management	5%		5%	
602	Business Management, Finance, and Taxation	40%		40%	
604	Marketing and Distribution Practices	30%		30%	
608	Community Resource Planning and Development	25%		25%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	1.5	0.0	0.0	0.0
Actual	4.4	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
77220	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
316396	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Outputs for entrepreneurship programs include publications, meetings, classes, workshops, conferences, one-on-one consultations, and web sites.

2. Brief description of the target audience

The University of Wyoming Cooperative Extension Service is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in Extension programs regardless of their race, national origin, gender, age, religion, or disability. Targeted audiences will be individuals who manage or may develop ventures relating to food and agricultural systems, a non-farm extension of a farm business, forestry, home trades, crafts, services, etc. Other audiences through which Wyoming CES program may be delivered include: teachers, public and private agencies, business owners/managers/employers, trade/produce groups, educational entities, identified publics, youth groups/students, and small acreage owners.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	100	500	100	500
2007	76	209	0	100

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1**Output Measure**

- Number of individuals assisted. Target is the number of individuals.

Year	Target	Actual
2007	25	16

Output #2**Output Measure**

- Participation in entrepreneurship programs designed for specific audiences including beginning farmers, multi-generation farm

Year	Target	Actual
2007	50	16

Output #3**Output Measure**

- Participation in program efforts to increase knowledge in the areas of transfer planning and estate planning. Target is the num

Year	Target	Actual
2007	50	66

Output #4**Output Measure**

- Participation in educational programs and utilization of information provided in the area of employee management. Target is th

Year	Target	Actual
2007	50	0

Output #5**Output Measure**

- Applied research projects initiated. Target is the number of research projects.

Year	Target	Actual
2007	0	0

Output #6**Output Measure**

- Participation in programs to evaluate new or specialty enterprises. Target is the number of participants.

Year	Target	Actual
2007	10	0

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Increased rural economic diversification. Target is number of participants reporting change in practice.
2	Enhanced incomes and jobs through business expansion or new businesses. Target is number of new businesses or expanded businesses reported.
3	Long-term changes in practices (as determined by follow-up surveys with those attending meetings, events and workshops). Target is number of participants reporting changes.
4	Improved business planning for realistic business success. Target is number of participants.
5	Improved management of risk, insurance, and labor. Target is number of agriculture producers reporting improved management practices.
6	Improved business/community collaborative work for long-range economic development. Target is number of collaboratives developed.
7	Improved ability to manage family quality-of-life concerns. Target is number of participants reporting change through evaluations.
8	Improved access to information on nontraditional, value-added enterprises and increased number of places these curricula are available. Target is number of individuals.
9	Knowledge and confidence gained (as measured by end-of-workshops forms). Target is number of participants.
10	Development of a business plan and establishment of goals. Target is number of participants.
11	Increased awareness and knowledge of available production and value-added alternatives. Target is number of agriculture producers.
12	Improved ability to market, produce, finance, and promote products from new enterprises. Target is number of firms or individuals.

Outcome #1**1. Outcome Measures**

Increased rural economic diversification. Target is number of participants reporting change in practice.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming is vulnerable because of its historical dependence on agriculture and extraction industries, coupled with its sparse population. Thus diversification is imperative for the survival of many communities. Although many rural people have skills and talents that could potentially generate income, they often do not have the information that can help them to develop economically viable alternative enterprises. Area advisory committees identified niche marketing as an important issue within the state.

What has been done

Educational programs have been conducted on estate planning and entrepreneurship. In addition a monthly electronic newsletter Enterprising Rural Families is distributed to over 250 individuals monthly.

Results

The entrepreneurship program is in early stages of development and has no results to report for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices
602	Business Management, Finance, and Taxation

Outcome #2**1. Outcome Measures**

Enhanced incomes and jobs through business expansion or new businesses. Target is number of new businesses or expanded businesses reported.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wyoming is vulnerable because of its historical dependence on agriculture and extraction industries, coupled with a sparse population. Entrepreneurs need the capacity to explore and start small or home-based businesses with emphasis on value-added agriculture, eco/agri-tourism, forestry, home trades, crafts, services, etc. Area advisory committees constituency groups and the general public identified diversification and small business development as important issues within the state.

What has been done

An electronic newsletter Enterprising Rural Families is distributed to over 250 individuals monthly.

Results

No results for 2007

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development
604	Marketing and Distribution Practices
602	Business Management, Finance, and Taxation

Outcome #3**1. Outcome Measures**

Long-term changes in practices (as determined by follow-up surveys with those attending meetings, events and workshops). Target is number of participants reporting changes.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)****What has been done****Results**

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
608	Community Resource Planning and Development
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #4

1. Outcome Measures

Improved business planning for realistic business success. Target is number of participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	5	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

No results for 2007

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices

Outcome #5**1. Outcome Measures**

Improved management of risk, insurance, and labor. Target is number of agriculture producers reporting improved management practices.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development

Outcome #6**1. Outcome Measures**

Improved business/community collaborative work for long-range economic development. Target is number of collaboratives developed.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices
608	Community Resource Planning and Development

Outcome #7**1. Outcome Measures**

Improved ability to manage family quality-of-life concerns. Target is number of participants reporting change through evaluations.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	20	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)****What has been done****Results**

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development

Outcome #8**1. Outcome Measures**

Improved access to information on nontraditional, value-added enterprises and increased number of places these curricula are available. Target is number of individuals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	16

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming is vulnerable because of its historical dependence on agriculture and extraction industries, coupled with its sparse population. Area advisory committees, constituency groups and the general public, identified diversification and small business development as important issues within the state.

What has been done

Enterprising Rural Families is a monthly newsletter distributed via e-mail and also available on the Enterprising Rural Families Web-site.

Results

Over 250 individuals receive the Enterprising Rural Families newsletter monthly. No results to report for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development

Outcome #9**1. Outcome Measures**

Knowledge and confidence gained (as measured by end-of-workshops forms).
Target is number of participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	60

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Diversification is imperative for the survival of many communities in Wyoming. Area Advisory Committees have identified diversification and small business development as important issues within the state.

What has been done

Presentations on Enterprising Rural Families CD Course were presented at the International Farm Management Association Congress in Cork, Ireland and the National Extension Risk Management Conference in Phoenix, Arizona.

Results

Awareness created.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices
608	Community Resource Planning and Development

Outcome #10**1. Outcome Measures**

Development of a business plan and establishment of goals. Target is number of participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	5	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)****What has been done****Results**

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
604	Marketing and Distribution Practices
608	Community Resource Planning and Development
602	Business Management, Finance, and Taxation
601	Economics of Agricultural Production and Farm Management

Outcome #11**1. Outcome Measures**

Increased awareness and knowledge of available production and value-added alternatives. Target is number of agriculture producers.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	40

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Diversification is imperative for the survival of many communities in Wyoming. Area advisory committees, constituency groups and the general public have listed this as a need.

What has been done

Four educational programs were presented by CES educators to raise awareness of value-added alternatives.

Results

100 percent of participants indicated they gained knowledge and awareness as a result of programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices

608	Community Resource Planning and Development
601	Economics of Agricultural Production and Farm Management

Outcome #12**1. Outcome Measures**

Improved ability to market, produce, finance, and promote products from new enterprises. Target is number of firms or individuals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
604	Marketing and Distribution Practices
601	Economics of Agricultural Production and Farm Management
608	Community Resource Planning and Development
602	Business Management, Finance, and Taxation

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Economy
- Public Policy changes
- Government Regulations
- Populations changes (immigration,new cultural groupings,etc.)
- Other (Changes in Technology)

Brief Explanation

The Community Development Education Initiative team lost two members last year; one to retirement, the other resigned. The shortage of personnel and prioritization of programs prevented full implementation of Entrepreneurship in 2007.

V(I). Planned Program (Evaluation Studies and Data Collection)**1. Evaluation Studies Planned**

- Before-After (before and after program)
- During (during program)

Evaluation Results

Key Items of Evaluation

Program #8**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(PSAS) Urban Horticulture and Master Gardeners

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	15%		15%	
111	Conservation and Efficient Use of Water	10%		10%	
124	Urban Forestry	10%		10%	
206	Basic Plant Biology	20%		20%	
211	Insects, Mites, and Other Arthropods Affecting Plants	10%		10%	
212	Pathogens and Nematodes Affecting Plants	5%		5%	
213	Weeds Affecting Plants	10%		10%	
216	Integrated Pest Management Systems	15%		15%	
806	Youth Development	5%		5%	
Total		100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	8.0	0.0	0.8	0.0
Actual	10.8	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
189540	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
774774	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

A variety of channels of the media will be used to familiarize the public with UW CES and AES areas of programming and personnel. Media releases in the local newspapers, radio spots and television advertisements will inform the public of upcoming Extension programs including contact persons. From the Ground Up television news segments will continue to be developed by UW CES field staff and aired on local and statewide television stations. Newsletter articles distributed both electronically and through the mail by county offices, Master Gardener organizations, area teams, and UW will reach producers, consumers and volunteers locally, area-wide, and state-wide. UW CES specialists will continue to develop Horticultural Train the Trainer events for the benefit of training UW CES field staff and long term Master Gardener volunteers. Public educational programs and conferences with invited speakers and Extension specialists and educators presenting research-based information will continue to be held in response to local, area, state, and national horticultural issues. Demonstrations of technology and skills training will be included in education curriculum to enhance educational effectiveness. Field tours will be organized to provide producers, consumers and volunteers with the opportunity to observe industry procedures. Recruitment of Master Gardener, 4-H leaders, and youths as well as other volunteers will occur on an ongoing basis. Over the course of the five years, Wyoming will see an overall increase in the number of Master Gardeners. 4-H Vegetable and Forestry judging programs will provide youth with opportunities to evaluate the value of fresh produce and forest products. 4-H gardening project leaders and youth will receive training in proper gardening practices. In addition AES has initiated research in organic based gardening which is supplying produce to two local farmers markets (Laramie, Sheridan).

2. Brief description of the target audience

The University of Wyoming is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in programs regardless of their race, national origin, gender, age, religion, or disability. Participants will include policy makers for County, State, and Federal government agencies, horticultural crop producers and consumers, Master Gardener and 4-H volunteers, youths, leaders, and potential investors. An existing secondary audience will be the media, general public, and interested groups not directly involved in the production of horticultural crops or products.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	20000	50000	500	1000
2007	18923	50000	500	1000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	3	6	9

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of horticulture contacts reached. Target is the number of contacts.

Year	Target	Actual
2007	5000	18923

Output #2

Output Measure

- Number of individuals participating in educational programs. Target is number of individuals.

Year	Target	Actual
2007	1000	1964

Output #3

Output Measure

- Volunteers completing Master Gardener training. Target is number of new volunteers each year.

Year	Target	Actual
2007	100	100

Output #4

Output Measure

- Measures of AES success will be tied to grant dollars, publication and adoption of improved species and techniques. The ultir

Year	Target	Actual
2007	11	13

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Awareness created and knowledge increased. Target is number of participants in horticulture programs.
2	Wyoming crop producers will be able to substitute traditional or current crop production with alternative horticultural crops to market if increased profitability may result. Target is number of crop producers.
3	Water conservation will improve the profitability and sustainability of Wyoming's green industry and municipal water supplies. Target is number of individuals reporting water conservation practices adopted.
4	Youth and their families will choose gardening as a healthy choice for active living. Target is number of youth and families reporting gardening practices increased.
5	Research efforts will develop integrated pest management systems for turf. Target is number of systems developed.
6	Research efforts will develop improved water and nutrient management systems in turf. Target is the number of systems developed.
7	Research will evaluate and develop suitable grape varieties for Wyoming's varied climates. Targets are number of grape varieties.
8	Improve profitability and sustainability of the horticulture industry in the High Plains. Targets are number of horticulture industry operations reporting improved profitability.

Outcome #1**1. Outcome Measures**

Awareness created and knowledge increased. Target is number of participants in horticulture programs.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	1000	22125

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Demand for consumer-based horticulture is a large local, area, and state-wide need. Wyoming's environment includes less than optimal soil conditions, a very harsh climate for many horticultural crops and growing practices; the variation in elevation across the state as well as short growing seasons all contribute to difficult growing conditions.

What has been done

UW CES has initiated Master Gardener programs in 12 counties in the state. Master Gardeners receive 40 hours of training, and must pass a certification test. In addition CES educators conducted over 86 educational programs for Master Gardeners and the general public. The Horticulture Issue team produces weekly 70 second TV spots aired on a commercial television station out of Casper which covers much of the state. Horticulture educators offer garden tours, many conduct home visits to diagnose and offer advice on diseases and other problems associated with horticulture. Many contacts with clientele are through individual office visits or phone calls.

Results

Program participants report increased awareness of proper growing techniques and practices in addition to increased knowledge. The Master Gardener program in Wyoming has an over 90 percent completing rate.

4. Associated Knowledge Areas

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods Affecting Plants
206	Basic Plant Biology
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
111	Conservation and Efficient Use of Water
124	Urban Forestry
212	Pathogens and Nematodes Affecting Plants
102	Soil, Plant, Water, Nutrient Relationships

Outcome #2**1. Outcome Measures**

Wyoming crop producers will be able to substitute traditional or current crop production with alternative horticultural crops to market if increased profitability may result. Target is number of crop producers.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	10

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

In Wyoming, horticulture involves commercial production of vegetables, fruits, herbaceous and woody ornamentals, turf grass sod and seed. The commercial green industry in Wyoming is young, diverse, and widely dispersed. It is comprised of greenhouses, florists, garden centers, landscape care companies, nurseries, tree care companies, and interior plantscapers. Wyoming consumers spend \$100,000,000 on goods and services from the green industry annually contributing a high level to Wyoming's economy. Nationally, the green industries are the fastest growing segment of agriculture production today.

What has been done

The state horticulture specialist collaborates with the Wyoming Groundskeepers and Growers Association, playing a lead role in planning and implementation of their annual conference. The state horticulture specialist works individually with crop producers to share information about alternative horticulture crops. The specialist also sends out an electronic newsletter "Hort Short Notes" during the growing season to address alternative horticulture crops.

Results

CES's involvement working with the green industry is very new. The state horticulture specialist has had success with 10 growers having them implement alternative crops. There is no report on profit or sustainability of new crops this year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
206	Basic Plant Biology

Outcome #3**1. Outcome Measures**

Water conservation will improve the profitability and sustainability of Wyoming's green industry and municipal water supplies. Target is number of individuals reporting water conservation practices adopted.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	600

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

In Wyoming, horticulture involves commercial production of vegetables, fruits, herbaceous and woody ornamentals, turf grass sod and seed. The commercial green industry in Wyoming is young, diverse, and widely dispersed. It is comprised of greenhouses, florists, garden centers, landscape care companies, nurseries, tree care companies, and interior plantscapers. Wyoming consumers spend \$100,000,000 on goods and services from the green industry annually contributing a high level to Wyoming's economy. Wyoming has been experiencing drought conditions since the late 90's. Water conservation is a critical element to profitability and sustainability of the green industry.

What has been done

Water conservation was addressed at the annual meeting of the Wyoming Groundskeepers and Growers Association. This topic is also part of the curriculum for the Master Gardener Volunteer program. Individual sessions conducted by CES educators also address water conservation with topics such as Xeroscape landscaping and demonstration gardens showing best practices for Wyoming's climate.

Results

Over 200 individuals from the green industry, 100 master gardeners, and over 300 citizens in Wyoming participated in sessions focused on water conservation. 100 percent indicated increasing knowledge and awareness. This is a long term outcome, which is in early stages.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
206	Basic Plant Biology
213	Weeds Affecting Plants
111	Conservation and Efficient Use of Water

Outcome #4

1. Outcome Measures

Youth and their families will choose gardening as a healthy choice for active living. Target is number of youth and families reporting gardening practices increased.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	500	318

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wyoming horticulture involves both commercial and consumer home gardens. The 4-H program introduces youth to horticulture practices which may lead to a career in the field or simply the joy of a successful home garden. The Horticulture issue team considers the youth audience important to growth in the horticulture field.

What has been done

CES educators and volunteers including 4-H leaders and Master Gardeners work with youth to teach best practices in horticulture crop production. 4-H project clubs meet on a regular basis to teach members about gardening and crop production. Vegetable judging which is held at the county and state level teaches youth standards in produce and decision making skills in addition to communication skills.

Results

The 4-H/youth program is the avenue which the horticulture team reach a youth audience. In 2007, 318 youth enrolled in horticulture or gardening projects. 100 percent of enrollees demonstrated horticulture skills through exhibits, demonstrations, and participating in judging contest. Informal interviews with youth at the Wyoming State Fair indicated that through this project they gained a deeper appreciation for gardening and horticulture and planned to continue this in future years. Of the 318 members enrolled, over 50 percent had carried these projects more than one year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
206	Basic Plant Biology
124	Urban Forestry
213	Weeds Affecting Plants
102	Soil, Plant, Water, Nutrient Relationships
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
216	Integrated Pest Management Systems
806	Youth Development
111	Conservation and Efficient Use of Water

Outcome #5

1. Outcome Measures

Research efforts will develop integrated pest management systems for turf.
Target is number of systems developed.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Annual bluegrass is an invader of many bentgrass greens around the state and presents a serious management problem for golf course managers.

What has been done

Trials were initiated at two sites this past year to evaluate the effectiveness of herbicides alone or in combination with growth regulators to manage annual bluegrass on bentgrass greens.

Results

Several herbicide/growth regulator treatments showed promise for control of this species on bentgrass greens, however several applications were required. Timing of treatment and green cutting height appeared to be important factors influencing the effectiveness of herbicide/growth regulator treatments.

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems

Outcome #6

1. Outcome Measures

Research efforts will develop improved water and nutrient management systems in turf. Target is the number of systems developed.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Water and nutrient management systems in turf play a big role in ground water contamination around the state.

What has been done

Trials will be established at two sites in 2008.

Results

No data collected in 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water

Outcome #7

1. Outcome Measures

Research will evaluate and develop suitable grape varieties for Wyoming's varied climates. Targets are number of grape varieties.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	3	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Many people are interested in producing high value crops such as grapes on relatively small acreages. One of the biggest problems encountered throughout the state is a hard freeze at the time it bed break.

What has been done

Research trials have been established at several locations in the state to evaluate 36 cold tolerant varieties and two cultupul treatments on their effects on early bed dormancy break.

Results

Several of the cold tolerant varieties appear promising as does timing of vine pruning to minimize spring frost damage.

4. Associated Knowledge Areas

KA Code	Knowledge Area
206	Basic Plant Biology

Outcome #8**1. Outcome Measures**

Improve profitability and sustainability of the horticulture industry in the High Plains. Targets are number of horticulture industry operations reporting improved profitability.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	3	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

No report for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
206	Basic Plant Biology
102	Soil, Plant, Water, Nutrient Relationships
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
216	Integrated Pest Management Systems
213	Weeds Affecting Plants
806	Youth Development
111	Conservation and Efficient Use of Water
124	Urban Forestry

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Appropriations changes

Brief Explanation

Wyoming continues to deal with drought conditions which impact ability to successfully grow horticulture crops. Water conservation is a critical issue in the state, especially during years with drought conditions. Programming with the green industry is in early stages, with growth, more programming and results should be reported.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- During (during program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #9**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(4-H) Volunteer Management

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	100%		100%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	15.0	0.0	0.0	0.0
Actual	7.5	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
131625	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
543422	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Activities include training on the following topics: Ages and stages of youth; Risk Management; Youth Development Concepts; Non-Profit Management/Coordination; Financial Management/IRS Issues; Project Training; Learning Styles; Club Maintenance; Recruitment and Retention.

2. Brief description of the target audience

The University of Wyoming College of Agriculture is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in Extension programs regardless of their race, national origin, gender, age, religion, or disability. 4-H Volunteers will be recruited from the following groups: Adults in the Community, Other Agencies, Civic Groups, Youth Groups, and the General Public.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	2500	5000	7000	15000
2007	3107	5000	8100	17764

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of volunteers enrolled as leaders in the 4-H program. Target is the number of volunteers.

Year	Target	Actual
2007	3000	3107

Output #2

Output Measure

- Number of volunteers participating in formal training programs. Target is number of volunteers participating.

Year	Target	Actual
2007	600	3567

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Volunteers will demonstrate knowledge of youth development principals. Target is number of volunteers.
2	Volunteers will learn and apply the experiential learning model. Target is number of volunteers.
3	Trained adult volunteers will demonstrate skills and abilities in which they are able to foster youth to become responsible adults. Target is number of volunteers.
4	Increased knowledge in project areas. Target is number of volunteers.
5	Volunteers become key players in 4-H and youth development programs. Target is number of volunteers.

Outcome #1**1. Outcome Measures**

Volunteers will demonstrate knowledge of youth development principals. Target is number of volunteers.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	338

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Through a program delivery system which includes all 23 counties in Wyoming as well as the Wind River Indian Reservation, 4-H presents a strong, positive image challenging young people to prepare for their future roles as leaders. Adult volunteers are a key to success in the 4-H program. Trained leaders provide support and training to members in local clubs.

What has been done

UW CES 4-H program initiated in the past year on-line certification training for volunteer leaders. The training teaches risk management, in addition to basic concepts about youth development. In addition CES youth educators across the state provided training on specific project areas. These training sessions also incorporate youth development principles. The state 4-H leaders council working with youth educators and the state 4-H office sponsor a 4-H Leader's conference each year which provides training and networking opportunities. 4-H newsletters are distributed approximately 11 times per year in all counties in the state which include youth development principals.

Results

4-H leaders completing on-line training were able to demonstrate knowledge of youth development principles. Over 90 percent of leaders completing the course indicated they had gained confidence and skills as a result of training.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #2**1. Outcome Measures**

Volunteers will learn and apply the experiential learning model. Target is number of volunteers.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	3200

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

4-H is the Cooperative Extension System's dynamic educational program for today's youth. Through a program delivery system which includes all 23 counties in Wyoming as well as the Wind River Indian Reservation, 4-H presents a strong, positive image challenging young people to prepare for their future roles as leaders. Adult volunteers are a key to success in the 4-H program. Trained leaders provide support and training to members of local clubs. Recruitment, training, and management of volunteers is a major thrust of the 4-H youth development program.

What has been done

3200 volunteer leaders and parents received training from 4-H youth educators. Project or subject matter training ranging from livestock and quality assurance to implementation of new clothing project materials were held in Wyoming's 23 counties. Training curriculum follows an experiential learning model.

Results

100 percent of leaders participating in training report increased knowledge and awareness.
75 percent of leaders participating in training report they plan to use materials and information gained with youth in their local 4-H clubs.
Over 80 percent of leaders participating in training indicated their confidence had increased.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #3**1. Outcome Measures**

Trained adult volunteers will demonstrate skills and abilities in which they are able to foster youth to become responsible adults. Target is number of volunteers.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	300

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

4-H is the dynamic educational program for youth conducted by the Cooperative Extension Service. Adult volunteers play a key role in the success of the program.

What has been done

Training by UW CES youth educators has been conducted in all 23 counties in Wyoming. Over 3200 adults participated in training in the past year. Training focused on pillars of character, project subject matter, and leadership development skills. Youth educators also write monthly newsletters which contain information which help youth and adults.

Results

300 volunteers who completed formal evaluations demonstrated skills and abilities and increased county involvement which helps foster youth to become responsible adults. Over half of Wyoming Counties reported an increase in volunteer involvement in county programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #4**1. Outcome Measures**

Increased knowledge in project areas. Target is number of volunteers.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	200	3200

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

4-H is the Cooperative Extension System's dynamic educational program for today's youth. Adult volunteer leaders are a key to success in the 4-H program. Traditional 4-H is delivered through local clubs and project meetings. Project training is essential for leaders to effectively teach youth.

What has been done

CES 4-H/youth educators conducted 107 training sessions on 4-H projects subject matter ranging from livestock fitting and showing to family and consumer sciences project training including foods and clothing. Training was also conducted on how to run project meetings, and certification training in Shooting Sports and Horse.

Results

Of the 3200 volunteer leaders who participated in training, approximately 1/4 completed formal evaluations. Those evaluations showed 100 percent increased knowledge and skills as a result of training. Ten percent reported they had implemented skills learned with their local club members. Over 90 percent reported their confidence had increased as a result of training.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #5**1. Outcome Measures**

Volunteers become key players in 4-H and youth development programs.
Target is number of volunteers.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	100

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

4-H is the Cooperative Extension System's dynamic educational program for today's youth. Adult volunteer leaders are a key to success in the 4-H program. Though Wyoming has over 3000 enrolled leaders, less than 1/3 are active beyond club level. A goal is to increase the number of volunteer leaders who take on leadership roles on the county and state level.

What has been done

Leader training at the State 4-H Leaders Conference; Leaders have been encouraged to attend training at the Western Regional 4-H Leaders Forum; Opportunities for key leader roles within 4-H development committees and to organize national youth trips by the State 4-H staff.

Results

Wyoming has a delegation of between 30 - 40 leaders who participate in the Western Regional 4-H Leaders Forum. Participants report this experience helps them develop leadership skills which enable them to take key leader roles in their counties. Over 100 volunteers participate in the State 4-H Leader's Conference.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Appropriations changes
- Competing Programatic Challenges

Brief Explanation

UW CES is hiring a Volunteer Management Specialist for 4-H in early 2008. This individual will provide leadership for training youth educators and developing curriculum for volunteers. This addition to the state 4-H staff should increase the ability of field educators to conduct additional training. Competing priorities for time is always a challenge when trying to motivate volunteers to attend training.

V(I). Planned Program (Evaluation Studies and Data Collection)**1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #10**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(4-H) Traditional 4-H

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management	10%		10%	
802	Human Development and Family Well-Being	10%		10%	
806	Youth Development	80%		80%	
Total		100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	15.0	0.0	0.0	0.0
Actual	18.7	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
328185	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
1344863	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

• Project or leadership activities • Present and/or facilitate educational programs • Recruitment • Training • Camps • Clinics • Contests • Media • Assessment.

2. Brief description of the target audience

The University of Wyoming College of Agriculture is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in Extension programs regardless of their race, national origin, gender, age, religion, or disability. Traditional 4-H youth audiences will target: • Youth • Volunteers • Families • Community.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	3000	5000	7000	10000
2007	3107	5000	28500	10000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of youth enrolled in the traditional 4-H program. Target is number of youth.

Year	Target	Actual
2007	7000	13557

Output #2

Output Measure

- Number of educational events, camps, training workshops, clinics implemented. Target is number of educational activities impl

Year	Target	Actual
2007	100	251

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Build life skills, including critical thinking, public speaking, teamwork, self-discipline, responsibility, decision making, self-esteem, communication and leadership. Wyoming youth will acquire and utilize knowledge. Target is number of youth reporting positive changes as result of 4-H program.
2	Empower youth to make logical decisions, develop a positive behavior (according to traditional values), effectively communicate, and establish a working relationship with others. Target is number of youth.
3	Wyoming youth build assets and essential life skills to lead productive, responsible and healthy lifestyles. Target is number of youth.

Outcome #1**1. Outcome Measures**

Build life skills, including critical thinking, public speaking, teamwork, self-discipline, responsibility, decision making, self-esteem, communication and leadership. Wyoming youth will acquire and utilize knowledge. Target is number of youth reporting positive changes as result of 4-H program.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	1000	6674

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

In Wyoming there are an estimated 75,000 youth between the ages of 8 and 18 according to the U.S. Census Bureau. 6674 Wyoming youth are enrolled in 804 clubs in the traditional 4-H program. The main focus of 4-H is the development of life skills, knowledge and leadership. According to the Search Institute "youth who have ten or fewer of the 40 external and internal assets are at high risk of developing at-risk behaviors". All of the 40 external and internal assets are likely to be developed by youth involved in the 4-H program.

What has been done

CES 4-H youth educators conducted approximately 300 educational workshops, field days, judging contest, camps, and retreats. In addition regional youth leadership conferences and local Junior Leader clubs provided training. Each Wyoming CES office distributes a 4-H newsletter at least 11 times a year.

Results

All youth enrolled in the 4-H program demonstrate project skills learned through exhibits at fairs and exhibitions. Over 2/3 of youth enrolled complete record book portfolios which report success the youth had in project work. Over a period of time (a member who joins when age 8 and continues until age 18) show growth in leadership and skills as a result of the 4-H program. Educators have testimonials from school teachers, counselors, and administrators that state "4-H members have stronger communication skills and ability to work in teams than non-4-H youth - it is easy to pick out a 4-H member".

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
806	Youth Development
802	Human Development and Family Well-Being

Outcome #2**1. Outcome Measures**

Empower youth to make logical decisions, develop a positive behavior (according to traditional values), effectively communicate, and establish a working relationship with others. Target is number of youth.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	1000	1000

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

In Wyoming there are an estimated 75,000 youth between the ages of 8 and 18 according to the U.S. Census Bureau. According to the Search Institute "youth who have ten or fewer of the 40 external and internal assets are at high risk of developing at-risk behaviors". All of the 40 external and internal assets are likely to be developed by youth involved in the 4-H program.

What has been done

UW CES developed the Youth Leadership/Youth in Governance Education program which emphasizes the genuine and meaningful engagement of young people in the planning and implementation of programs in which youths and adults have a shared voice, influence, and decision-making authority. By actively engaging youths in community decisions, the action-oriented goals established by youths will carry forward with them into the future. A team of 4-H/youth educators compiled and wrote a supporting curriculum titled "Wyoming Youth Leadership Education: Six Pillars of Leadership." During 2007, educators statewide provided a minimum of eight hours of training for more than 265 youth participants. Approximately 105 adult participants were also trained in the curriculum to either teach youth participants or work directly with youth in a decision making role. In addition youth participating in judging programs (Horse, Livestock, Meats, Wool, Vegetable) implemented in over half of the counties in the state, learn decision making and communication skills.

Results

The Youth Leadership/Youth in Governance program conducted evaluations where youth were asked to evaluate their knowledge before and after participation to determine program impact. The evaluation targeted youth participants' perceived knowledge and/or skill development in decision making, communication, accepting differences, leadership, and self responsibility. Participants reported increasing knowledge and skills in all areas targeted by the training program. Youth involved in judging programs demonstrated communication and decision making skills. Youth also reported gaining knowledge on standards of product or species judged.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
801	Individual and Family Resource Management
806	Youth Development

Outcome #3**1. Outcome Measures**

Wyoming youth build assets and essential life skills to lead productive, responsible and healthy lifestyles. Target is number of youth.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	500	500

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

According to the Search Institute "youth who have ten or fewer of the 40 external and internal assets are at high risk of developing at-risk behaviors". All of the 40 external and internal assets are likely to be developed by youth involved in the 4-H program.

What has been done

CES youth educators have conducted over 300 educational workshops, clinics, camps, judging events, and trainings to provide youth positive experiences which will help them build assets and essential life skills. Through 4-H club work, youth also have positive interaction with adults who can serve as mentors.

Results

Formal evaluations of 500 members show that 100 percent of youth report gaining knowledge and skills through the 4-H program. Youth identify character assets which they attribute to their membership in 4-H. Older youth (13 -18 years of age) demonstrate and provide testimonials of leadership development.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
806	Youth Development

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Backgrounds of Participants)

Brief Explanation

The largest external factor influencing the traditional 4-H program is competition for time.

V(I). Planned Program (Evaluation Studies and Data Collection)**1. Evaluation Studies Planned**

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #11**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(4-H) Non-Traditional 4-H

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%		100%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	0.0	0.0
Actual	5.2	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
91260	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
371170	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

• Cloverbuds (pre-4-H) • After School Programs • School Enrichment • Youth Leadership • Marketing • Camps

2. Brief description of the target audience

The University of Wyoming Cooperative Extension Service is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in Extension programs regardless of their race, national origin, gender, age, religion, or disability. The target audience will include: Underserved and high risk youth who do not participate in the traditional 4-H Youth program in Wyoming.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	500	1000	5000	10000
2007	500	2000	13355	10000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of non-traditional programs established. Target is number of programs.

Year	Target	Actual
2007	10	9

Output #2

Output Measure

- Number of youth enrolled in non-traditional youth development programs. Target is number of youth.

Year	Target	Actual
2007	5000	13355

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	Outcome Name
1	Increased: Knowledge Skills Self-Esteem Awareness Motivation Belonging Diversity. Target is number of youth reporting positive changes.
2	Youth Serving in Leadership Roles Youth Serving on Governing Bodies Youth Acting as Mentors Youth Teaching. Target is number of youth.
3	Decreased incidence of youth engaging in high risk behavior. Youth become responsible productive adults. Target is number of youth.

Outcome #1**1. Outcome Measures**

Increased: Knowledge Skills Self-Esteem Awareness Motivation Belonging Diversity. Target is number of youth reporting positive changes.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	1000	1426

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

In Wyoming there are an estimated 75,000 youth between the ages of 8 - 18 according to the U.S. Census Bureau. Of those 75,000 youth, 6,674 are enrolled in the traditional program. This leaves 68,236 youth in the state who are not being served by the traditional club 4-H program. 4-H focuses on the development of life skills and values. According to the Search Institute "Youth who have 10 or fewer of the 40 external and internal assets are at high risk of developing at-risk behaviors". All of the 40 external and internal assets are likely to be developed by youth involved in the 4-H program.

What has been done

After school programs, in-school enrichment classes, summer mini-camps and programs that work with youth below the state enrollment age, were all utilized to reach non-traditional youth.

Results

Formal evaluations conducted with 1426 youth participating in non-traditional 4-H educational programs indicate: Marty Moose - 5 lessons: practices improved by 47.5 percent.

Min-Society Community Camp - Pre-test score was 36%, post-test average score 70% - results 34% increase in knowledge.

Sharpen your Senses - 55 percent could identify items as part of activities in the program.

Southwest Wyoming Leadership Institute - Youth gained skills and knowledge which increased self-esteem.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2**1. Outcome Measures**

Youth Serving in Leadership Roles Youth Serving on Governing Bodies Youth Acting as Mentors Youth Teaching. Target is number of youth.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	500	474

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

By actively engaging youths in community decisions, the action-oriented goals established by youths will carry forward with them in the future. A need was identified statewide by stakeholders and partners in youth agencies and schools for a program which would provide youth participants the opportunity to cultivate leadership and life skills including communication, public speaking, decision making, teamwork, service, and character development.

What has been done

A team of 4-H/Youth educators compiled and wrote supporting curriculum titled: Wyoming Youth Leadership Education: Six Pillars of Leadership to direct and support the Youth Leadership/Youth in Governance initiative. Over the course of the year, 4-H educators statewide provided a minimum of 8 hours of training.

Results

Youth participants were evaluated using a post pre-retrospective evaluation method to determine the programmatic impact. The evaluation targeted youth participants' perceived knowledge and/or skill development in decision making, communication, accepting differences, leadership, and self responsibility. Participants reported increasing knowledge and skills in all areas targeted by the training program. Increases ranged from .52 to .81 from pre to post survey. A sample of testimonials from youth: "I learned that even if I am different, and maybe even weird, I like who I am and would never change myself for any reason." "The most important thing I learned is we have control to make our community better." "You learn so many different qualities and different ways to do things. I am the most proud of the fact that I can stand up in front of a big audience and put on a speech, I would have never been able to do that in school."

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #3**1. Outcome Measures**

Decreased incidence of youth engaging in high risk behavior. Youth become responsible productive adults. Target is number of youth.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

According to the Search Institute "Youth who have 10 or fewer of the 40 external and internal assets are at high risk of developing at-risk behaviors." All of the 40 external and internal assets are likely to be developed by youth involved in the 4-H program. Currently, Wyoming is reaching 6,674 youth in the traditional program. That leaves over 68,000 youth who are 4-H age that UW CES is not reaching through traditional methods. Stakeholders have identified at-risk youth as a important target audience.

What has been done

4-H/Youth educators have expanded programming to include non-traditional programs, such as school enrichment, after school, summer camps, weekend retreats, and other activities targeted at youth not enrolled in 4-H.

Results

Programs are seeing increased enrollment in non-traditional programs. Evaluation data to date does not show long term impacts measuring decreased incidence of youth engaging in high risk behavior.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)

Brief Explanation

Competing priorities for the public or traditional 4-H clientele, and challenges regarding funding to support non-traditional efforts.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #12**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(SMRR) Natural Resource Conservation and Management

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	10%		10%	
102	Soil, Plant, Water, Nutrient Relationships	10%		10%	
103	Management of Saline and Sodic Soils and Salinity	5%		5%	
111	Conservation and Efficient Use of Water	10%		10%	
121	Management of Range Resources	20%		20%	
123	Management and Sustainability of Forest Resources	10%		10%	
132	Weather and Climate	5%		5%	
135	Aquatic and Terrestrial Wildlife	15%		15%	
314	Toxic Chemicals, Poisonous Plants, Naturally Occuring Toxir	10%		10%	
605	Natural Resource and Environmental Economics	5%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	8.7	0.0
Actual	6.7	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
117585	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
451891	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Natural resource programs will reach out to a broad spectrum of constituents throughout Wyoming using a variety of sources. Outputs include methods such as workshops, short courses, publications, meetings, media releases, and feature articles.

2. Brief description of the target audience

The University of Wyoming is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in programs regardless of their race, national origin, gender, age, religion, or disability. The College of Agriculture is committed to transmitting unbiased scientific-based information to solve local and regional natural resource conflicts involving state, Federal, and private resources. All efforts will be made to provide information through direct contact and through publications, newsletters, Web sites and other methods. The general public and exurban landowners are among the target audiences.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	100	1000	20	200
2007	7617	30000	100	200

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	1
2007 :	1

Patents listed

Layered hydroxides and their use in removal of biological agents from aqueous systems.

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	12	62	74

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of programs implemented. Target is number of programs.

Year	Target	Actual
2007	5	38

Output #2

Output Measure

- Documented media efforts implemented. Target is number of media efforts.

Year	Target	Actual
2007	5	3

Output #3

Output Measure

- Number of individuals participating in educational programs or activities. Target is number of individuals participating.

Year	Target	Actual
2007	100	7618

Output #4

Output Measure

- Measures of the success of AES programs will be tied to grant dollars, patents, and a variety of protected products developed

Year	Target	Actual
2007	69	125

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Program success will be based on information provided in the form of publications, competitive grant dollars received, and contacts made.
2	Increase public knowledge and appreciation of natural resources and public awareness of sustainable natural resource utilization is raised. Target is number of participants reporting outcome.
3	General public understands the impact of resource use and management on the quality and quantity of the resources (i.e. water, rangeland, wildlife, viewsheds). Target is number of participants reporting outcome.
4	Raise the understanding of the interaction of natural resource use of Wyoming's economy. Target is number of participants reporting outcome.
5	Citizens will make better-informed decisions on natural resource issues and topics. Target is the number of participants reporting outcome.
6	Greater public consensus of management of private and public lands resulting in less litigation and burden on the system. Target is number producers reporting outcome.
7	To provide unbiased information that will reduce conflict and contribute to the economic and ecological sustainability of Wyoming communities. Target is number of TV spots developed.
8	Through research develop improved management systems for rangeland and forest resources. Target numbers are management systems developed.
9	Through research develop improved management techniques for poisonous and invasive plants on extensively managed ecosystems. Target is number of management techniques developed.
10	Through research develop improved soil, water, and nutrient management on extensively managed agroecosystems. Target numbers are new management techniques developed.
11	Through research develop improved reclamation techniques on drastically disturbed sites. Target numbers are reclamation techniques developed or improved.

Outcome #1**1. Outcome Measures**

Program success will be based on information provided in the form of publications, competitive grant dollars received, and contacts made.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

There are over 7 million hectares of BLM rangelands in Wyoming. Though potential sequestration per acre for rangeland is low, the large percentage makes it worth exploring.

What has been done

Studies were initiated in 1982 at the High Plains Grasslands Research Station near Cheyenne, WY using continuous season-long grazing at light or heavy stocking rates.

Results

Grazing significantly impacts carbon dynamics and plant community composition. With proper stocking rates grazing can enhance soil carbon and the potential for carbon sequestration.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

Outcome #2**1. Outcome Measures**

Increase public knowledge and appreciation of natural resources and public awareness of sustainable natural resource utilization is raised. Target is number of participants reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	500	500

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming's tremendous natural resources support an abundance of recreational opportunities but they also provide the basis for a number of industries that are very important to the state's economy. Forty-eight percent of the land area in Wyoming is publicly-owned and is managed by government agencies. Private lands are also important to watersheds, wildlife habitats and other values significant to all citizens. Despite the many natural resource-related opportunities, many Wyomingites are not directly tied to natural resources and agriculture. This results in a lack of knowledge and experiences regarding natural resource systems, their management and the industries they support.

What has been done

CES Extension Educators as members of the Sustainable Management of Rangeland Resources (SMRR) initiative team have developed from 2003 - 2007 over 150 video segments which are aired twice weekly on KCWY-TV in Casper, Wyoming which reaches over 2/3 of the state. Topics for the segments have been diverse ranging from "how sagebrush has adapted to our harsh environment" to "why burning can promote aspen growth". In addition to being aired twice weekly on TV, the segments have been assembled into a DVD which has been distributed to Wyoming Extension offices. The SMRR team contributes articles to newspaper supplements in an effort to reach the general public on natural resource topics.

Results

The TV segments which are in their 4th year of production reach approximately 30,000 homes. Feedback through referrals, office contacts, and e-mail indicate the segments have raised awareness with the public on natural resource issues.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
102	Soil, Plant, Water, Nutrient Relationships
123	Management and Sustainability of Forest Resources
135	Aquatic and Terrestrial Wildlife
605	Natural Resource and Environmental Economics
314	Toxic Chemicals, Poisonous Plants, Naturally Occuring Toxins, and Other Hazards Affecting Animals
101	Appraisal of Soil Resources
103	Management of Saline and Sodic Soils and Salinity
111	Conservation and Efficient Use of Water
132	Weather and Climate

Outcome #3

1. Outcome Measures

General public understands the impact of resource use and management on the quality and quantity of the resources (i.e. water, rangeland, wildlife, viewsheds). Target is number of participants reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	100

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wyoming's tremendous natural resources support an abundance of recreational opportunities but they also provide the basis for a number of industries that are very important to the state's economy. Forty-eight percent of the land area in Wyoming is publicly-owned and is managed by government agencies. Private lands are also important to watersheds, wildlife habitats and other values significant to all citizens. Despite the many natural resource-related opportunities, many Wyomingites are not directly tied to natural resources and agriculture. This results in a lack of knowledge and experiences regarding natural resource systems, their management and the industries they support.

What has been done

UW CES extension educators and specialists conducted 38 educational programs on topics such as water management, range monitoring, forages, and mitigation after wild fires. Newsletters, newspaper inserts, TV and radio and one-on-one contacts with clientele are methods to reach the audience.

Results

Formal evaluations were conducted at approximately 10 educational programs. Evaluation results show 100 program participants plan to or have made practice changes as a result of educational programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
121	Management of Range Resources
135	Aquatic and Terrestrial Wildlife
111	Conservation and Efficient Use of Water

Outcome #4

1. Outcome Measures

Raise the understanding of the interaction of natural resource use of Wyoming's economy. Target is number of participants reporting outcome.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	150

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wyoming's tremendous natural resources support an abundance of recreational opportunities but they also provide the basis for a number of industries that are very important to the state's economy. Forty-eight percent of the land area in Wyoming is publicly-owned and is managed by government agencies. Private lands are also important to watersheds, wildlife habitats and other values significant to all citizens. Despite the many natural resource-related opportunities, many Wyomingites are not directly tied to natural resources and agriculture. This results in a lack of knowledge and experiences regarding natural resource systems, their management and the industries they support.

What has been done

Educational programs delivered by UW CES educators focused on natural resources and the economy - these included property management planning, High Plains Ranch Practicum (a 5 session course); Master Cattleman course (8 sessions); Estimating stock rates/carrying capacity for range leases; basic management classes.

Results

Agriculture producers participating in classes reported 100% increase in understanding of the interaction of natural resource use of Wyoming's economy. Over 50% of participants identified energy related use of natural resources as a concern.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
103	Management of Saline and Sodic Soils and Salinity
111	Conservation and Efficient Use of Water
121	Management of Range Resources
605	Natural Resource and Environmental Economics

Outcome #5**1. Outcome Measures**

Citizens will make better-informed decisions on natural resource issues and topics. Target is the number of participants reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming's tremendous natural resources support an abundance of recreational opportunities but they also provide the basis for a number of industries that are very important to the state's economy. Forty-eight percent of the land area in Wyoming is publicly-owned and is managed by government agencies. Private lands are also important to watersheds, wildlife habitats and other values significant to all citizens. Despite the many natural resource-related opportunities, many Wyomingites are not directly tied to natural resources and agriculture. This results in a lack of knowledge and experiences regarding natural resource systems, their management and the industries they support.

What has been done

Educational programs, weekly TV spots, other media efforts including radio, newspaper, newsletters, range tours and applied research.

Results

This is a long term impact, no report the first year of the program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
605	Natural Resource and Environmental Economics
111	Conservation and Efficient Use of Water
123	Management and Sustainability of Forest Resources

Outcome #6**1. Outcome Measures**

Greater public consensus of management of private and public lands resulting in less litigation and burden on the system. Target is number producers reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming's tremendous natural resources support an abundance of recreational opportunities but they also provide the basis for a number of industries that are very important to the state's economy. Forty-eight percent of the land area in Wyoming is publicly-owned and is managed by government agencies. Private lands are also important to watersheds, wildlife habitats and other values significant to all citizens. Despite the many natural resource-related opportunities, many Wyomingites are not directly tied to natural resources and agriculture. This results in a lack of knowledge and experiences regarding natural resource systems, their management and the industries they support.

What has been done

CES educators serve as facilitators with Federal and State agencies managing public lands (BLM, Forest Service) and agriculture producers. Educational programs focus on research based information and assisting with setting common goals for producers and agencies involved in management of land.

Results

This is a long-term outcome. No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
111	Conservation and Efficient Use of Water
121	Management of Range Resources

Outcome #7**1. Outcome Measures**

To provide unbiased information that will reduce conflict and contribute to the economic and ecological sustainability of Wyoming communities. Target is number of TV spots developed.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	30

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming's tremendous natural resources support an abundance of recreational opportunities but they also provide the basis for a number of industries that are very important to the state's economy. Forty-eight percent of the land area in Wyoming is publicly-owned and is managed by government agencies. Private lands are also important to watersheds, wildlife habitats and other values significant to all citizens. Despite the many natural resource-related opportunities, many Wyomingites are not directly tied to natural resources and agriculture. This results in a lack of knowledge and experiences regarding natural resource systems, their management and the industries they support.

What has been done

The SMRR initiative team developed and produced 30, 60-second TV spots aired twice weekly on a commercial television station in Casper, Wyoming which reaches approximately 2/3 of the state in coverage.

Results

To date over 150 TV spots have been produced over a four year period. Success of this effort can be documented through external funding received to sponsor the segments. Clientele frequently call CES offices requesting additional information or seek follow-up answers on segments. Educators document interaction with the public on these spots. This is a long term outcome, which at this stage is raising awareness with the general public on natural resource issues.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
605	Natural Resource and Environmental Economics
121	Management of Range Resources
123	Management and Sustainability of Forest Resources
135	Aquatic and Terrestrial Wildlife

Outcome #8**1. Outcome Measures**

Through research develop improved management systems for rangeland and forest resources. Target numbers are management systems developed.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	3	1

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Timber harvesting can potentially impact above and below ground forest c pods. Two dominant coniferus forest species exist in Wyoming - Ponderosa and lodge pole pine.

What has been done

Four ponderosa pine stands (unmanaged even aged habitat, uneven aged harvest and heavy harvest) were studied.

Results

The value of managed forest land expands beyond income defined from sale of timber and potentially the sale of carbon. Results in healthier stands with greater resistance to withstand disease attack as well as succceptibility to wild fir. The average amount of carbon stored in ornamental stands was approximately 1 lb./acre whereas carbon storage in the intensively managed stand averaged 9 lb./year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

Outcome #9

1. Outcome Measures

Through research develop improved management techniques for poisonous and invasive plants on extensively managed ecosystems. Target is number of management techniques developed.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	4	3

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Arid and semi-arid ecosystems throughout the West are being overrun by perennial invasive exotic plant species. Many of these invaders form long lived species pod stands and they limit biodiversity.

What has been done

Native grass genotypes from weed invasion areas have been combined for their competitive ability against weeds.

Results

Finding competitive genotypes of native grasses for seeding in revegetation efforts will have a huge and lasting impact on the prevalence of invasive exotics. In 2006 over 9.8 million acres burned in the U.S. When coupled with energy development and associated infrastructure the need for more competitive grasses for revegetation efforts is critical.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
121	Management of Range Resources

Outcome #10**1. Outcome Measures**

Through research develop improved soil, water, and nutrient management on extensively managed agroecosystems. Target numbers are new management techniques developed.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2	1

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Dehydration of our environment by manipulation of soil and water or modification of air resources has the potential to impact ecosystem function including agroecosystems at local and regional levels. The energy industries drive much of the economy in Wyoming, but extrapolation has negative surface impacts.

What has been done

We have investigated the recovery of various ecosystem components at reclaimed surface coal mined sites for over ten years.

Results

It has been determined that communities of soil organisms such as bacteria, fungi, nematodes and arthropods are generally recovering. Further ecosystem functions such as decomposition, nutrient cycle, water intake and soil structural development are returning to similar levels as that found in undisturbed sites.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

Outcome #11

1. Outcome Measures

Through research develop improved reclamation techniques on drastically disturbed sites. Target numbers are reclamation techniques developed or improved.

2. Associated Institution Types

•1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wide spread natural gas development has created a need for site specific reclamation guidelines.

What has been done

The need for these types of projects has arisen from the rapid pace of energy and other types of development across Wyoming.

Results

Efforts are underway to bring governmental agencies, energy producers, reclamation companies and consultants together in a way where reclamation can be accomplished expeditiously using past and present findings to develop eco-regular specific methods.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Other (Technology changes)

Brief Explanation

Competing public priorities are an external factor contributing to the success of this program.

V(l). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Comparison between locales where the program operates and sites without program intervention

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #13**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(NFS) Type 2 Diabetes - Healthy Choices & Lifestyle Promotion

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	85%		85%	
724	Healthy Lifestyle	15%		15%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	0.0	0.0
Actual	5.4	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
94770	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
392071	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

• Educational Programs • Educational Messages • Media Outreach • Health Fairs • Educator Training • Assessment/Data Collection

2. Brief description of the target audience

The University of Wyoming College of Agriculture is committed to reaching underrepresented groups and individuals, and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in Extension programs regardless of their race, national origin, gender, age, religion, or disability. This program targets the general public (youth and adults) with Type 2 Diabetes.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	500	1000	100	500
2007	147	1191	0	500

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Dining with Diabetes programs offered in Wyoming communities. Target is number of programs.

Year	Target	Actual
2007	5	7

Output #2

Output Measure

- Number of partnerships with Diabetes coordinators, public health or other agencies formed. Target is number of partnerships.

Year	Target	Actual
2007	5	11

Output #3

Output Measure

- Individuals completing the series of classes on Dining with Diabetes. Target is number of individuals.

Year	Target	Actual
2007	100	147

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Improved attitude related to diabetes self-care, food, and physical activity. Target is number of individuals reporting improved attitude.
2	Increased knowledge of healthy food choices for optimal diabetes management. Target is number of participants reporting increased knowledge.
3	Improved skill in selection of healthy foods. Target is number of individuals reporting improved skills.
4	Improved attitudes about healthy eating being appealing. Target is number of participants.
5	Improved eating behavior practices, food choices, and lifestyle habits. Target is number of participants.
6	Increased participation in physical activity. Target is number of participants.
7	Improved blood glucose control. Target is number of participants reporting improvement.
8	Improved health and diabetes management. Target is number of participants.
9	Decreased chronic disease risk factors. Target is number of participants.
10	Decreased medical costs. Target is number of participants reporting decreased medical costs.

Outcome #1**1. Outcome Measures**

Improved attitude related to diabetes self-care, food, and physical activity.

Target is number of individuals reporting improved attitude.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	147

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Nearly 21 million Americans - 7% of the population - have diabetes. Estimated economic costs of diabetes in 2002 were \$132 billion; on a per capita basis, that translates to an economic burden in Wyoming of \$22 million. Partners and stakeholders have identified this as an important issue.

What has been done

With support from the Wyoming Diabetes Prevention and Control Program, UW Extension nutrition and food safety educators teamed with local diabetes educators to conduct Dining with Diabetes in Wyoming. This five-session program combines education on diabetes self-care with recipe demonstrations, food tasting, nutrition information, and low-impact physical activity for people of all fitness levels.

Results

Pre-and post-questionnaires and follow-up surveys were conducted to measure impact:

Short term - by the end of the program participants reported having a better understanding of "the plate method for portioning their food" and "purposely adding physical activity 2 - 3 times a day to their usual routines.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #2**1. Outcome Measures**

Increased knowledge of healthy food choices for optimal diabetes management. Target is number of participants reporting increased knowledge.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	147

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nearly 21 million Americans-7% of the population-have diabetes. Estimated economic costs of diabetes in 2002 were \$132 billion; on a per capita basis, that translates to an economic burden in Wyoming of \$22 million. Quality-of-life costs of complications resulting from uncontrolled diabetes-complications such as amputations, blindness, and kidney failure-are incalculable.

What has been done

With support from the Wyoming Diabetes Prevention and Control Program, UW CES nutrition and food safety educators have teamed with local diabetes educators to conduct Dining with Diabetes in Wyoming. The five-session program combines education on diabetes self-care with recipe demonstrations, food tasting, nutrition information, and low-impact physical activity for people of all fitness levels.

Results

100 percent of participants reported gaining a better understanding of the plate method for portioning their food. Over 50 percent of participants indicated they had gained knowledge of diabetes management through the course.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #3**1. Outcome Measures**

Improved skill in selection of healthy foods. Target is number of individuals reporting improved skills.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	147

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Nearly 21 million Americans-7% of the population-have diabetes. Estimated economic costs of diabetes in 2002 were \$132 billion; on a per capita basis, that translates to an economic burden in Wyoming of \$22 million. Quality-of-life costs of complications resulting from uncontrolled diabetes-complications such as amputations, blindness, and kidney failure are incalculable.

What has been done

With support from the Wyoming Diabetes Prevention and Control Program, UW CES nutrition and food safety educators have teamed with local diabetes educators to conduct Dining with Diabetes in Wyoming. The five-session program combines education on diabetes self-care with recipe demonstrations, food tasting, nutrition information, and low-impact physical activity for people of all fitness levels.

Results

Pre-and post-questionnaires were administered in addition to follow-up surveys: Over 75 percent of participants indicated they had improved skills in selection of healthy foods.

A sample of testimonials from participants:

"The program reinforced the need to eat more vegetables. I changed the arrangement in my refrigerator so the meat is in a lower drawer and the vegetables are on the open shelves". "Eating right can be delicious".

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #4**1. Outcome Measures**

Improved attitudes about healthy eating being appealing. Target is number of participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	147

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Nearly 21 million Americans-7%of the population-have diabetes. Estimated economic costs of diabetes in 2002 were \$132 billion; on a per capita basis, that translates to an economic burden in Wyoming of \$22 million. Quality-of-life costs of complications resulting from uncontrolled diabetes-complications such as amputations, blindness, and kidney failure are incalculable.

What has been done

With support from the Wyoming Diabetes Prevention and Control Program, UW CES nutrition and food safety educators have teamed with local diabetes educators to conduct Dining with Diabetes in Wyoming. The five-session program combines education on diabetes self-care with recipe demonstrations, food tasting, nutrition information, and low-impact physical activity for people of all fitness levels.

Results

Based on completed questionnaires (59 at pre-program, 40 at post-program, and 33 at follow-up), over 50 percent of the program participants indicated they had improved attitudes about eating healthy foods. Participants stated the food sampling and learning new recipes helped with the attitude change. In the three month follow up participants indicated they feel more strongly that they can continue to eat their favorite foods.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #5**1. Outcome Measures**

Improved eating behavior practices, food choices, and lifestyle habits. Target is number of participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	75	59

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Nearly 21 million Americans-7% of the population-have diabetes. Estimated economic costs of diabetes in 2002 were \$132 billion; on a per capita basis, that translates to an economic burden in Wyoming of \$22 million. Quality-of-life costs of complications resulting from uncontrolled diabetes-complications such as amputations, blindness, and kidney failure are incalculable.

What has been done

With support from the Wyoming Diabetes Prevention and Control Program, UW CES nutrition and food safety educators have teamed with local diabetes educators to conduct Dining with Diabetes in Wyoming. The five-session program combines education on diabetes self-care with recipe demonstrations, food tasting, nutrition information, and low-impact physical activity for people of all fitness levels.

Results

Participants reported they feel more strongly that:
healthy foods can taste good; they can enjoy foods that are healthy for people with diabetes; they can eat their favorite foods; physical activity comes more easily to them.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #6**1. Outcome Measures**

Increased participation in physical activity. Target is number of participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	59

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Nearly 21 million Nearly 21 million Americans-7% of the population-have diabetes. Estimated economic costs of diabetes in 2002 were \$132 billion; on a per capita basis, that translates to an economic burden in Wyoming of \$22 million. Quality-of-life costs of complications resulting from uncontrolled diabetes-complications such as amputations, blindness, and kidney failure are incalculable.

What has been done

With support from the Wyoming Diabetes Prevention and Control Program, UW CES nutrition and food safety educators have teamed with local diabetes educators to conduct Dining with Diabetes in Wyoming. The five-session program combines education on diabetes self-care with recipe demonstrations, food tasting, nutrition information, and low-impact physical activity for people of all fitness levels.

Results

Participants reported by the end of the program they were purposely adding physical activity 2-3 times a day to their usual routines.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #7

1. Outcome Measures

Improved blood glucose control. Target is number of participants reporting improvement.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nearly 21 million Americans-7% of the population-have diabetes. Estimated economic costs of diabetes in 2002 were \$132 billion; on a per capita basis, that translates to an economic burden in Wyoming of \$22 million. Quality-of-life costs of complications resulting from uncontrolled diabetes-complications such as amputations, blindness, and kidney failure are incalculable.

What has been done

With support from the Wyoming Diabetes Prevention and Control Program, UW CES nutrition and food safety educators have teamed with local diabetes educators to conduct Dining with Diabetes in Wyoming. The five-session program combines education on diabetes self-care with recipe demonstrations, food tasting, nutrition information, and low-impact physical activity for people of all fitness levels.

Results

No report for 2007. This will be a long term outcome in following year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #8

1. Outcome Measures

Improved health and diabetes management. Target is number of participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Nearly 21 million Americans-7% of the population-have diabetes. Estimated economic costs of diabetes in 2002 were \$132 billion; on a per capita basis, that translates to an economic burden in Wyoming of \$22 million. Quality-of-life costs of complications resulting from uncontrolled diabetes-complications such as amputations, blindness, and kidney failure are incalculable.

What has been done

With support from the Wyoming Diabetes Prevention and Control Program, UW CES nutrition and food safety educators have teamed with local diabetes educators to conduct Dining with Diabetes in Wyoming. The five-session program combines education on diabetes self-care with recipe demonstrations, food tasting, nutrition information, and low-impact physical activity for people of all fitness levels.

Results

No report for 2007, this is a long term outcome, to be addressed in future years.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #9**1. Outcome Measures**

Decreased chronic disease risk factors. Target is number of participants.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Nearly 21 million Americans-7% of the population-have diabetes. Estimated economic costs of diabetes in 2002 were \$132 billion; on a per capita basis, that translates to an economic burden in Wyoming of \$22 million. Quality-of-life costs of complications resulting from uncontrolled diabetes-complications such as amputations, blindness, and kidney failure are incalculable.

What has been done

With support from the Wyoming Diabetes Prevention and Control Program, UW CES nutrition and food safety educators have teamed with local diabetes educators to conduct Dining with Diabetes in Wyoming. The five-session program combines education on diabetes self-care with recipe demonstrations, food tasting, nutrition information, and low-impact physical activity for people of all fitness levels.

Results

No report for 2007, this is a long term outcome.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
703	Nutrition Education and Behavior

Outcome #10

1. Outcome Measures

Decreased medical costs. Target is number of participants reporting decreased medical costs.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nearly 21 million Americans-7% of the population-have diabetes. Estimated economic costs of diabetes in 2002 were \$132 billion; on a per capita basis, that translates to an economic burden in Wyoming of \$22 million. Quality-of-life costs of complications resulting from uncontrolled diabetes-complications such as amputations, blindness, and kidney failure are incalculable.

What has been done

With support from the Wyoming Diabetes Prevention and Control Program, UW CES nutrition and food safety educators have teamed with local diabetes educators to conduct Dining with Diabetes in Wyoming. The five-session program combines education on diabetes self-care with recipe demonstrations, food tasting, nutrition information, and low-impact physical activity for people of all fitness levels.

Results

No report for 2007, program is in first year of implementation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
703	Nutrition Education and Behavior

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)

Brief Explanation

In 2007 UW CES had two new Nutrition/Food Safety educators who were establishing programs in their areas; in addition, this is the first year of the program, partnerships were being developed and curriculum tested.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- Time series (multiple points before and after program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #14**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(SMRR) 4-H/Youth Natural Resource Education

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%		10%	
104	Protect Soil from Harmful Effects of Natural Elements	10%		10%	
112	Watershed Protection and Management	15%		15%	
121	Management of Range Resources	20%		20%	
131	Alternative Uses of Land	5%		5%	
132	Weather and Climate	5%		5%	
206	Basic Plant Biology	5%		5%	
211	Insects, Mites, and Other Arthropods Affecting Plants	5%		5%	
213	Weeds Affecting Plants	5%		5%	
306	Environmental Stress in Animals	20%		20%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	1.0	0.0	0.0	0.0
Actual	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

- Produce informative single topic media using television, radio and other venues where appropriate
- Develop and/or present programs on natural resources at youth activities
- Produce, or update currently produced educational materials targeted to youth on natural resource education
- Produce information/education modules emphasizing natural resource topics for 4 H leader use in 4-H project with large enrollment

2. Brief description of the target audience

The University of Wyoming Cooperative Extension Service is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in Extension programs regardless of their race, national origin, gender, age, religion, or disability. The target audience for this program is: general youth and traditional 4-H members.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	50	100	100	500
2007	0	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of youth participating in natural resource educational programs or activities. Target is the number of youth participants

Year	Target	Actual
2007	100	0

Output #2

Output Measure

- Number of youth related natural resource programs implemented. Target is number of programs implemented.

Year	Target	Actual
2007	5	0

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Citizens will make more informed public policy decisions on natural resources. Target is number of citizens.
2	Increased interest in potential careers in natural resources. Target is number of youth reporting career choices in natural resources.
3	Increased enrollment in 4-H natural resource programs (projects, camps, activities). Target is number enrolled in 4-H natural resource programs.
4	Increase appreciation of natural resources within 4-H project groups who may not be formally enrolled in natural resource project areas. Target is number of youth reporting increased appreciation.
5	Increase knowledge, awareness and skills among youth on natural resources, their management and associated issues. Target is number of youth.
6	Enrich non-natural resource 4-H project curricula by inserting appropriate natural resource education topics into them. Target is changes in 4-H project curricula.

Outcome #1**1. Outcome Measures**

Citizens will make more informed public policy decisions on natural resources.

Target is number of citizens.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Building strong natural resource programs for youth will continue to foster interest in natural resource careers, knowledge about the land, how to be good stewards of the land, and how to be prepared to make informed decisions about the use and management of Wyoming's natural resources as adults.

What has been done

This program was not implemented in 2007

Results

No program implementation for 2007

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

Outcome #2**1. Outcome Measures**

Increased interest in potential careers in natural resources. Target is number of youth reporting career choices in natural resources.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

To foster interest in natural resource careers, natural resource programs for youth and increasing youth development opportunities are key.

What has been done

No implementation of this plan for 2007.

Results

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

Outcome #3**1. Outcome Measures**

Increased enrollment in 4-H natural resource programs (projects, camps, activities). Target is number enrolled in 4-H natural resource programs.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Natural resources make up a large portion of Wyoming. The SMRR initiative team identified youth as a key audience to foster interest in natural resource careers.

What has been done

No implementation for 2007.

Results

No Results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
104	Protect Soil from Harmful Effects of Natural Elements
121	Management of Range Resources
213	Weeds Affecting Plants
112	Watershed Protection and Management
132	Weather and Climate
211	Insects, Mites, and Other Arthropods Affecting Plants
306	Environmental Stress in Animals
206	Basic Plant Biology
131	Alternative Uses of Land

Outcome #4**1. Outcome Measures**

Increase appreciation of natural resources within 4-H project groups who may not be formally enrolled in natural resource project areas. Target is number of youth reporting increased appreciation.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

The SMRR team identified youth and expanding efforts in 4-H natural resource projects as an important issue.

What has been done

No implementation for 2007.

Results

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
213	Weeds Affecting Plants
306	Environmental Stress in Animals
102	Soil, Plant, Water, Nutrient Relationships
211	Insects, Mites, and Other Arthropods Affecting Plants
132	Weather and Climate
131	Alternative Uses of Land
104	Protect Soil from Harmful Effects of Natural Elements
121	Management of Range Resources
206	Basic Plant Biology

Outcome #5**1. Outcome Measures**

Increase knowledge, awareness and skills among youth on natural resources, their management and associated issues. Target is number of youth.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

4-H youth present an immediate natural resource education audience and an opportunity to reach the broader youth audience with educational resources. This will continue to foster interest in natural resource careers, knowledge about the land, how to be good stewards of the land, how to be prepared to make informed decisions about the use and management of Wyoming's natural resources as adults.

What has been done

No implementation for 2007.

Results

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

Outcome #6**1. Outcome Measures**

Enrich non-natural resource 4-H project curricula by inserting appropriate natural resource education topics into them. Target is changes in 4-H project curricula.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	1	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

4-H is an avenue to introduce natural resource education through existing programs. The SMRR team has identified youth as an important audience.

What has been done

No implementation for 2007.

Results

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

Competing programmatic challenges - with priorities being set on adult audiences prevented this plan from implementation.

V(I). Planned Program (Evaluation Studies and Data Collection)**1. Evaluation Studies Planned**

- Retrospective (post program)
- During (during program)
- Time series (multiple points before and after program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #15

V(A). Planned Program (Summary)

1. Name of the Planned Program

(NFS) Primary Prevention: Promote Healthier Food Choices and Lifestyles

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	70%		70%	
724	Healthy Lifestyle	30%		30%	
Total		100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	0.0	0.0
Actual	5.4	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
94770	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
392071	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• Educational Programs • Educational Messages • Media Outreach • Health Fairs • Educator Training • Assessment/Data Collection

2. Brief description of the target audience

The University of Wyoming is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in programs regardless of their race, national origin, gender, age, religion, or disability. Targeted audience includes: general public, both adults and youth and policy makers.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	200	1000	200	1000
2007	2441	1000	937	2000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	4	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of participants in educational programs or activities. Target is number of participants.

Year	Target	Actual
2007	300	3378

Output #2

Output Measure

- Number of educational activities or programs implemented. Target is number of educational activities.

Year	Target	Actual
2007	25	82

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Individuals gain awareness, knowledge & skills related to: -improved attitude about healthy eating -increased knowledge of healthy food choices -improved skill in selection of healthy foods -improved body image. Target is number of individuals.
2	Individuals incorporate skills and change behaviors related to: -increased participation in physical activity -improved eating behavior practices -improved food choices -adoption of recommended food-related practices for disease prevention. Target is number of individuals.
3	Individuals and families experience: -improved nutritional health -reduced medical costs -health improved through improved community opportunities -healthier weight -decreased risk factors for nutrition-health related problems. Target is number of individuals and/or families.

Outcome #1**1. Outcome Measures**

Individuals gain awareness, knowledge & skills related to: -improved attitude about healthy eating -increased knowledge of healthy food choices -improved skill in selection of healthy foods -improved body image. Target is number of individuals.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	2441

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

According to the Centers for Disease Control and Prevention and other organizations, too many Americans: are not eating well; are not active enough; don't enjoy physical activity; have a poor body image. The national anti-obesity atmosphere is pushing many people to focus exclusively on trying to lose weight rather than achieving a healthy, enjoyable lifestyle.

What has been done

Educators in Wyoming, Idaho, and Montana collaborated to offer Steps to a New You as part of an applied research project between 2004 and 2006. The 7-session Steps to a New You program uses multiple educational methods, hands-on experiences, and pedometers and record-keeping tools to help participants develop new attitudes and behaviors related to food, physical activity, and body image. In addition, educators delivered educational programs on a multitude of nutrition topics with the goal of helping individuals adopt healthy lifestyles.

Results

Participants in educational programs reported significant improvements in many lifestyle habits, for example: eating more...fruits, vegetables, and whole grains; drinking less...soda pop; ordering fewer....super-sized portions; less often...eating while doing another activity.

They reported increasing their average daily steps over 24%; adding physical activity to their daily routine; participating in more physical activities, including strength training.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
703	Nutrition Education and Behavior

Outcome #2**1. Outcome Measures**

Individuals incorporate skills and change behaviors related to: -increased participation in physical activity -improved eating behavior practices -improved food choices -adoption of recommended food-related practices for disease prevention. Target is number of individuals.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	250

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

According to the Centers for Disease Control and Prevention and other organizations, too many Americans: are not eating well; are not active enough; don't enjoy physical activity; have a poor body image. The national anti-obesity atmosphere is pushing many people to focus exclusively on trying to lose weight rather than achieving a healthy, enjoyable lifestyle.

What has been done

Educators in Wyoming, Idaho, and Montana collaborated to offer Steps to a New You as part of an applied research project between 2004 and 2006. The 7-session Steps to a New You program uses multiple educational methods, hands-on experiences, and pedometers and record-keeping tools to help participants develop new attitudes and behaviors related to food, physical activity, and body image. In addition, educators delivered educational programs on a multitude of nutrition topics with the goal of helping individuals adopt healthy lifestyles.

Results

Evaluations of 250 participants report participants made significant improvements in selecting healthy foods, decreasing use of soda pop, and ordering fewer super-sized portions. They reported increasing their average daily steps over 24%, and adding physical activity to their daily routine, including strength-training. They reported increasing their enjoyment of physical activity.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #3**1. Outcome Measures**

Individuals and families experience: -improved nutritional health -reduced medical costs -health improved through improved community opportunities -healthier weight -decreased risk factors for nutrition-health related problems. Target is number of individuals and/or families.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	15

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

According to the Centers for Disease Control and Prevention and other organizations, too many Americans: are not eating well; are not active enough; don't enjoy physical activity; have a poor body image. The national anti-obesity atmosphere is pushing many people to focus exclusively on trying to lose weight rather than achieving a healthy, enjoyable lifestyle.

What has been done

Educators in Wyoming, Idaho, and Montana collaborated to offer Steps to a New You as part of an applied research project between 2004 and 2006. The 7-session Steps to a New You program uses multiple educational methods, hands-on experiences, and pedometers and record-keeping tools to help participants develop new attitudes and behaviors related to food, physical activity, and body image. In addition, educators delivered educational programs on a multitude of nutrition topics with the goal of helping individuals adopt healthy lifestyles.

Results

This is a long term goal - participants from the three-state research project through testimonials said: "My cholesterol level came down. Overall better health."

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
703	Nutrition Education and Behavior

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Public priorities
- Competing Programatic Challenges

Brief Explanation

Educators are creating awareness; competing programmatic challenges, and competing time challenges for clientele influence the implementation of this program.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #16**V(A). Planned Program (Summary)****1. Name of the Planned Program**

(PSAS and SMRR) Wyoming Small Acreages

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	14%		14%	
104	Protect Soil from Harmful Effects of Natural Elements	14%		14%	
112	Watershed Protection and Management	14%		14%	
121	Management of Range Resources	16%		16%	
131	Alternative Uses of Land	14%		14%	
601	Economics of Agricultural Production and Farm Management	14%		14%	
602	Business Management, Finance, and Taxation	14%		14%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	0.0	0.0
Actual	3.7	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
64935	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
264504	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Development of a statewide database of defining characteristics of small acre owners (who they are, what they want and need to know, and how they want that information). Educational programs targeted at small acreage landowners emphasizing sustainable land management practices. Individual interaction with small acreage landowners educating them on resources available to assist them with sustainable land management practices. Development and distribution of a targeted, user friendly publication providing education on sustainable land management practices. Coordination with other interested agencies to provide education to this clientele, and funding for this effort. Provide educational opportunities for professionals involved with small acreage landowners. Seek external funding to provide education to natural resource professionals, and small acreage landowners.

2. Brief description of the target audience

The University of Wyoming College of Agriculture is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in Extension programs regardless of their race, national origin, gender, age, religion, or disability. The target audience for this program is individuals who reside on small acreages of 40 acres or less.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	500	2000	0	0
2007	1741	4000	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	3	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of individuals participating in educational programs and activities. Target is number of individuals participating.

Year	Target	Actual
2007	100	813

Output #2

Output Measure

- Number of educational programs implemented. Target is number of programs implemented.

Year	Target	Actual
2007	5	30

Output #3

Output Measure

- Number of subscriptions to Barnyards and Backyards publication. Target is paid subscription numbers for magazine.

Year	Target	Actual
2007	1500	2200

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Increase awareness, knowledge, skills and aspirations of small acreage landowners for managing their resources. Target is number of participants reporting outcome.
2	Improve resource management practices of small acre landowners. Target is number of participants reporting outcome.
3	Tools and techniques will be provided for small farm landowners who want to develop businesses. Target is number of participants reporting outcome.
4	Create a "culture of stewardship" among small acreage landowners. Target is number of participants reporting outcome.
5	Small farm businesses will be developed. Target is number of businesses developed.
6	Improved small acreage landowner understanding of Wyoming's laws and regulations of land management issues (ex. trespass, fence laws, neighborliness). Target is number of participants reporting outcome.
7	Increase the proportion of small acreage land managers who are managing their land in a sustainable manner. Target is number of participants reporting outcome.

Outcome #1**1. Outcome Measures**

Increase awareness, knowledge, skills and aspirations of small acreage landowners for managing their resources. Target is number of participants reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	813

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming and the Western U.S. are undergoing a very rapid shift in land use. Thousands of acres of former ranch, farm, or wild lands are being subdivided into small acreage parcels. As this occurs, the number of small acreage landowners is growing. Small acreage landowners are eager for information that will help them live their desired lifestyle while being good stewards of their resources.

What has been done

To meet the educational needs of small acreage landowners, a collaborative, multi-pronged approach to land management education was initiated by UW CES. Both Sustainable Management of Rangeland Resources and Profitable and Sustainable Agriculture initiative teams partnered with seven state agencies or organizations to form the Small Acreage Issue Team. The Small Acreage Issue Team publishes a quarterly magazine Barnyards & Backyards which contains articles written by natural resource experts on topics of interest to rural homeowners. UW CES educators and partners conduct educational workshops targeted at small acreage landowners. Each summer through grant funds, the Small Acreage Issue Team hires college interns who do landowner visits.

Results

100 percent of workshop participants reported increasing awareness and skills of management of their land as a result of programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
601	Economics of Agricultural Production and Farm Management
102	Soil, Plant, Water, Nutrient Relationships
602	Business Management, Finance, and Taxation
104	Protect Soil from Harmful Effects of Natural Elements
112	Watershed Protection and Management
121	Management of Range Resources

Outcome #2**1. Outcome Measures**

Improve resource management practices of small acre landowners. Target is number of participants reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	50

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming and the Western U.S. are undergoing a very rapid shift in land use. Thousands of acres of former ranch, farm, or wild lands are being subdivided into small acreage parcels. As this occurs, the number of small acreage landowners is growing. Small acreage landowners are eager for information that will help them live their desired lifestyle while being good stewards of their resources.

What has been done

To meet the educational needs of small acreage landowners, a collaborative, multi-pronged approach to land management education was initiated by UW CES. Both Sustainable Management of Rangeland Resources and Profitable and Sustainable Agriculture initiative teams partnered with seven state agencies or organizations to form the Small Acreage Issue Team. The Small Acreage Issue Team publishes a quarterly magazine Barnyards & Backyards which contains articles written by natural resource experts on topics of interest to rural homeowners. UW CES educators and partners conduct educational workshops targeted at small acreage landowners. Each summer through grant funds, the Small Acreage Issue Team hires college interns who do landowner visits.

Results

Follow-up with landowners who participated in individual site visits and workshop participants indicated 50 had changed practices which improved management of their small acreage.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
601	Economics of Agricultural Production and Farm Management
104	Protect Soil from Harmful Effects of Natural Elements
602	Business Management, Finance, and Taxation
102	Soil, Plant, Water, Nutrient Relationships
121	Management of Range Resources
131	Alternative Uses of Land

Outcome #3**1. Outcome Measures**

Tools and techniques will be provided for small farm landowners who want to develop businesses. Target is number of participants reporting outcome.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wyoming and the Western U.S. are undergoing a very rapid shift in land use. Thousands of acres of former ranch, farm, or wild lands are being subdivided into small acreage parcels. As this occurs, the number of small acreage landowners is growing. Small acreage landowners are eager for information that will help them live their desired lifestyle while being good stewards of their resources.

What has been done

To meet the educational needs of small acreage landowners, a collaborative, multi-pronged approach to land management education was initiated by UW CES. Both Sustainable Management of Rangeland Resources and Profitable and Sustainable Agriculture initiative teams partnered with seven state agencies or organizations to form the Small Acreage Issue Team. The Small Acreage Issue Team publishes a quarterly magazine Barnyards & Backyards which contains articles written by natural resource experts on topics of interest to rural homeowners. UW CES educators and partners conduct educational workshops targeted at small acreage landowners. Each summer through grant funds, the Small Acreage Issue Team hires college interns who do landowner visits.

Results

No result for 2007 - this program is in early stages.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #4**1. Outcome Measures**

Create a "culture of stewardship" among small acreage landowners. Target is number of participants reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming and the Western U.S. are undergoing a very rapid shift in land use. Thousands of acres of former ranch, farm, or wild lands are being subdivided into small acreage parcels. As this occurs, the number of small acreage landowners is growing. Small acreage landowners are eager for information that will help them live their desired lifestyle while being good stewards of their resources.

What has been done

To meet the educational needs of small acreage landowners, a collaborative, multi-pronged approach to land management education was initiated by UW CES. Both Sustainable Management of Rangeland Resources and Profitable and Sustainable Agriculture initiative teams partnered with seven state agencies or organizations to form the Small Acreage Issue Team. The Small Acreage Issue Team publishes a quarterly magazine Barnyards & Backyards which contains articles written by natural resource experts on topics of interest to rural homeowners. UW CES educators and partners conduct educational workshops targeted at small acreage landowners. Each summer through grant funds, the Small Acreage Issue Team hires college interns who do landowner visits.

Results

Long term impact - no report for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
121	Management of Range Resources
131	Alternative Uses of Land

Outcome #5**1. Outcome Measures**

Small farm businesses will be developed. Target is number of businesses developed.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	1	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming and the Western U.S. are undergoing a very rapid shift in land use. Thousands of acres of former ranch, farm, or wild lands are being subdivided into small acreage parcels. As this occurs, the number of small acreage landowners is growing. Small acreage landowners are eager for information that will help them live their desired lifestyle while being good stewards of their resources.

What has been done

To meet the educational needs of small acreage landowners, a collaborative, multi-pronged approach to land management education was initiated by UW CES. Both Sustainable Management of Rangeland Resources and Profitable and Sustainable Agriculture initiative teams partnered with seven state agencies or organizations to form the Small Acreage Issue Team. The Small Acreage Issue Team publishes a quarterly magazine Barnyards & Backyards which contains articles written by natural resource experts on topics of interest to rural homeowners. UW CES educators and partners conduct educational workshops targeted at small acreage landowners. Each summer through grant funds, the Small Acreage Issue Team hires college interns who do landowner visits.

Results

No results for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
131	Alternative Uses of Land

Outcome #6**1. Outcome Measures**

Improved small acreage landowner understanding of Wyoming's laws and regulations of land management issues (ex. trespass, fence laws, neighborliness). Target is number of participants reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	45

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming and the Western U.S. are undergoing a very rapid shift in land use. Thousands of acres of former ranch, farm, or wild lands are being subdivided into small acreage parcels. As this occurs, the number of small acreage landowners is growing. Small acreage landowners are eager for information that will help them live their desired lifestyle while being good stewards of their resources.

What has been done

To meet the educational needs of small acreage landowners, a collaborative, multi-pronged approach to land management education was initiated by UW CES. Both Sustainable Management of Rangeland Resources and Profitable and Sustainable Agriculture initiative teams partnered with seven state agencies or organizations to form the Small Acreage Issue Team. The Small Acreage Issue Team publishes a quarterly magazine Barnyards & Backyards which contains articles written by natural resource experts on topics of interest to rural homeowners. UW CES educators and partners conduct educational workshops targeted at small acreage landowners. Each summer through grant funds, the Small Acreage Issue Team hires college interns who do landowner visits.

Results

Workshop evaluations indicated participants gained knowledge and that participant questions were answered. Respondents indicated they gained awareness and understanding laws and regulations related to land ownership.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
131	Alternative Uses of Land
601	Economics of Agricultural Production and Farm Management

Outcome #7**1. Outcome Measures**

Increase the proportion of small acreage land managers who are managing their land in a sustainable manner. Target is number of participants reporting outcome.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	813

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Wyoming and the Western U.S. are undergoing a very rapid shift in land use. Thousands of acres of former ranch, farm, or wild lands are being subdivided into small acreage parcels. As this occurs, the number of small acreage landowners is growing. Small acreage landowners are eager for information that will help them live their desired lifestyle while being good stewards of their resources.

What has been done

To meet the educational needs of small acreage landowners, a collaborative, multi-pronged approach to land management education was initiated by UW CES. Both Sustainable Management of Rangeland Resources and Profitable and Sustainable Agriculture initiative teams partnered with seven state agencies or organizations to form the Small Acreage Issue Team. The Small Acreage Issue Team publishes a quarterly magazine Barnyards & Backyards which contains articles written by natural resource experts on topics of interest to rural homeowners. UW CES educators and partners conduct educational workshops targeted at small acreage landowners. Each summer through grant funds, the Small Acreage Issue Team hires college interns who do landowner visits.

Results

100 percent of landowners participating in small acreage workshops and home visits reported at least one practice change which increases management in a sustainable manner. Specific changes identified by participants: Better management of grazing, weed control; Weed control, pasture rotation, food plots; Plant a wind break, wildlife landscaping, weed control; Plan to expand bird habitat, rotate animal grazing, locate septic system and have inspection.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
112	Watershed Protection and Management
104	Protect Soil from Harmful Effects of Natural Elements
102	Soil, Plant, Water, Nutrient Relationships
602	Business Management, Finance, and Taxation
131	Alternative Uses of Land
121	Management of Range Resources

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

Wyoming continues to experience drought conditions. Competing priorities for time for educators and landowners affect direct contact.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- During (during program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #17

V(A). Planned Program (Summary)

1. Name of the Planned Program

(SMRR) Natural Resource Education for Agricultural Producer and Agency Personnel

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	20%		20%	
121	Management of Range Resources	65%		65%	
132	Weather and Climate	5%		5%	
135	Aquatic and Terrestrial Wildlife	5%		5%	
136	Conservation of Biological Diversity	5%		5%	
Total		100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual	5.3	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
93015	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
380540	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Workshops on sustainable rangeland and animal management principles will be offered within each extension area within the state. Provide professional development opportunities for rangeland professionals. Develop written educational materials on rangeland and animal management practices and principles (fact sheets, bulletins, media, presentations, Web). Conduct technical consultation on rangeland and animal management, and monitoring of rangelands. Develop media on rangeland management principles (radio, TV, press). Conduct research and demonstrations on sustainable natural resource management principles. Work with individual rangeland managers on developing, implementing, and evaluating sustainable management practices.

2. Brief description of the target audience

The University of Wyoming College of Agriculture is committed to reaching underrepresented groups and individuals and to implementing the objectives of equal opportunity regulations relative to the consideration and treatment of clientele for participation in Extension programs regardless of their race, national origin, gender, age, religion, or disability. The target audience for this program is: The general public, agricultural producers and federal and state land management agency personnel.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	100	1000	100	500
2007	1156	6000	35	100

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	13	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational programs or activities implemented. Target is the number of educational programs or activities.

Year	Target	Actual
2007	5	10

Output #2

Output Measure

- Number of Agency personnel, range professionals, and general public participating in training. Target is the number of particip

Year	Target	Actual
2007	100	1156

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Raise awareness, knowledge, and skills for development, implementation and evaluation of land management plans that include management of grazing and browsing animals, and adjusting management as necessary to meet objectives. Target is the number of participants reporting outcome.
2	Raise awareness of tools to affect management of rangeland resources and herbivores. Target is number of participants reporting outcome.
3	Raise knowledge on specific range management practices including economic analysis. Target is the number of participants reporting outcome.
4	Assist land managers, public and private, in the development, implementation and evaluation of plans for improved management of rangeland resources and associated herbivores. Target is number of range management plans developed.
5	More profit for range-based agricultural enterprises. Target is number of agriculture enterprises reporting increased profit.
6	Improve values of rangelands for multiple uses. Target is number of producers reporting improved values.
7	Improved rangeland health, productivity, and profitability. Target is number of agriculture operations reporting outcome.

Outcome #1**1. Outcome Measures**

Raise awareness, knowledge, and skills for development, implementation and evaluation of land management plans that include management of grazing and browsing animals, and adjusting management as necessary to meet objectives. Target is the number of participants reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	20	1156

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

About 73 percent of Wyoming agriculture is based on livestock production. At least 95 percent of Wyoming's livestock operations utilize rangeland, and many of these operations use public land leases as a portion of their forage base. Livestock on public rangelands is managed by producers in cooperation with government agencies. Continuing education opportunities are essential for both agricultural producers and agency personnel to maintain or improve their management skills, to minimize producer-agency conflict.

What has been done

UW CES educators provided workshops and classes on sustainable rangeland and animal management principles; range monitoring courses; water conservation and management. Developed written educational materials on rangeland and animal management practices and principles (fact sheets, bulletins, presentations, media, Web). Conduct technical consultation on rangeland and animal management, and monitoring of rangelands. Specialists and field educators conducted research and demonstrations on sustainable natural resource principles.

Results

Both formal and informal evaluations were used at the end of sessions with participants. 100 percent of participants indicated they had gained awareness and knowledge as a result of workshops and classes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
135	Aquatic and Terrestrial Wildlife
112	Watershed Protection and Management
132	Weather and Climate
136	Conservation of Biological Diversity

Outcome #2**1. Outcome Measures**

Raise awareness of tools to affect management of rangeland resources and herbivores. Target is number of participants reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	265

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

About 73 percent of Wyoming agriculture is based on livestock production. At least 95 percent of Wyoming's livestock operations utilize rangeland, and many of these operations use public land leases as a portion of their forage base. Livestock on public rangelands is managed by producers in cooperation with government agencies. Continuing education opportunities are essential for both agricultural producers and agency personnel to maintain or improve their management skills, to minimize producer-agency conflict.

What has been done

UW CES educators provided workshops and classes on sustainable rangeland and animal management principles; range monitoring courses; water conservation and management. Developed written educational materials on rangeland and animal management practices and principles (fact sheets, bulletins, presentations, media, Web). Conduct technical consultation on rangeland and animal management, and monitoring of rangelands. Specialists and field educators conducted research and demonstrations on sustainable natural resource principles.

Results

265 agency personnel and agriculture producers participated in range monitoring (Range 101 and Range 103) courses in addition to single session range monitoring classes. 100 percent of participants reported increased awareness of range monitoring tools as a result of educational efforts.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
135	Aquatic and Terrestrial Wildlife

Outcome #3**1. Outcome Measures**

Raise knowledge on specific range management practices including economic analysis. Target is the number of participants reporting outcome.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	265

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

About 73 percent of Wyoming agriculture is based on livestock production. At least 95 percent of Wyoming's livestock operations utilize rangeland, and many of these operations use public land leases as a portion of their forage base. Livestock on public rangelands is managed by producers in cooperation with government agencies. Continuing education opportunities are essential for both agricultural producers and agency personnel to maintain or improve their management skills, to minimize producer-agency conflict.

What has been done

UW CES educators provided workshops and classes on sustainable rangeland and animal management principles; range monitoring courses; water conservation and management. Developed written educational materials on rangeland and animal management practices and principles (fact sheets, bulletins, presentations, media, Web). Conduct technical consultation on rangeland and animal management, and monitoring of rangelands. Specialists and field educators conducted research and demonstrations on sustainable natural resource principles

Results

Participants in rangeland monitoring classes and workshops reported both through formal and informal evaluations that awareness increased regarding economic analysis of rangeland practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

Outcome #4

1. Outcome Measures

Assist land managers, public and private, in the development, implementation and evaluation of plans for improved management of rangeland resources and associated herbivores. Target is number of range management plans developed.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	12

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

About 73 percent of Wyoming agriculture is based on livestock production. At least 95 percent of Wyoming's livestock operations utilize rangeland, and many of these operations use public land leases as a portion of their forage base. Livestock on public rangelands is managed by producers in cooperation with government agencies. Continuing education opportunities are essential for both agricultural producers and agency personnel to maintain or improve their management skills, to minimize producer-agency conflict.

What has been done

UW CES educators provided workshops and classes on sustainable rangeland and animal management principles; range monitoring courses; water conservation and management. Developed written educational materials on rangeland and animal management practices and principles (fact sheets, bulletins, presentations, media, Web). Conduct technical consultation on rangeland and animal management, and monitoring of rangelands. Specialists and field educators conducted research and demonstrations on sustainable natural resource principles.

Results

Working with individual producers, 12 management plans were developed. All producers developed objectives and a plan for implementation. In all instances, this was a part of CPM (cooperative permit monitoring). Agency personnel report that these efforts save resources (personnel and time). One CES educator was recognized nationally for his efforts in range monitoring.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
135	Aquatic and Terrestrial Wildlife

Outcome #5

1. Outcome Measures

More profit for range-based agricultural enterprises. Target is number of agriculture enterprises reporting increased profit.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

About 73 percent of Wyoming agriculture is based on livestock production. At least 95 percent of Wyoming livestock operations utilize rangeland, and many of these operations use public land leases as a portion of their forage base. Livestock on public rangelands is managed by producers in cooperation with government agencies. Continuing education opportunities are essential for both agricultural producers and agency personnel to maintain or improve their management skills, to minimize producer-agency conflict.

What has been done

UW CES educators provided workshops and classes on sustainable rangeland and animal management principles; range monitoring courses; water conservation and management. Developed written educational materials on rangeland and animal management practices and principles (fact sheets, bulletins, presentations, media, Web). Conduct technical consultation on rangeland and animal management, and monitoring of rangelands. Specialists and field educators conducted research and demonstrations on sustainable natural resource principles.

Results

This is a long-term outcome. No report for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

Outcome #6

1. Outcome Measures

Improve values of rangelands for multiple uses. Target is number of producers reporting improved values.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	5	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

About 73 percent of Wyoming agriculture is based on livestock production. At least 95 percent of Wyoming's livestock operations utilize rangeland, and many of these operations use public land leases as a portion of their forage base. Livestock on public rangelands is managed by producers in cooperation with government agencies. Continuing education opportunities are essential for both agricultural producers and agency personnel to maintain or improve their management skills, to minimize producer-agency conflict.

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Results

This is a long term outcome - no report for 2007.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
135	Aquatic and Terrestrial Wildlife

Outcome #7**1. Outcome Measures**

Improved rangeland health, productivity, and profitability. Target is number of agriculture operations reporting outcome.

2. Associated Institution Types

•1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10	88

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

About 73 percent of Wyoming agriculture is based on livestock production. At least 95 percent of Wyoming's livestock operations utilize rangeland, and many of these operations use public land leases as a portion of their forage base. Livestock on public rangelands is managed by producers in cooperation with government agencies. Continuing education opportunities are essential for both agricultural producers and agency personnel to maintain or improve their management skills, to minimize producer-agency conflict.

What has been done

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Results

Participants in educational program shared the following through formal and informal evaluations:
 Over 25% reported improved rangeland health and productivity as a result of range courses.
 30 percent reported learning management techniques to help during drought conditions.

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
132	Weather and Climate
135	Aquatic and Terrestrial Wildlife

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

Drought continues to be an issue in Wyoming. Over the past year UW CES had a vacancy in one range specialist position, which was not filled until November 2007.

V(I). Planned Program (Evaluation Studies and Data Collection)**1. Evaluation Studies Planned**

- Retrospective (post program)
- Before-After (before and after program)
- Case Study

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}